

“Shifting from one to the other brings on pneumonia”

a Goonya first reader about the notable David Unaipon

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Declaration

I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.



Martin Bush

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Abstract

David Unaipon is probably the most publicly noted Indigenous Australian. This is a literature search on Unaipon—read by an Anglo Brisbane boy—for the purposes of informing an interactive science museum exhibit commemorating Unaipon's inventions.

Unaipon's celebrity derived much from journalists' amazement that a blackfella could learnedly discourse about science. Today this admiration seems quite racist. While Unaipon's literary works have received recent critical attention, Unaipon's scientific work has been less studied. Claims have often been repeated in early forms.

This thesis provides a critical reflection on the public record of Unaipon's scientific work. This record shows a man inspired by knowledge from all walks of life; for someone who used his talents for show to help his people in the way he thought best.

These texts are assessed for the purposes of writing a short text. Existing and possible interpretive strategies are investigated with a view to achieve the stated exhibition goals.

Conventional science centre presentations employ a positivistic account of knowledge in which facts are decontextualised and uncertainties are avoided. Such a schema is unable to interpret adequately Unaipon's hybrid identity.

My preference is for a framework which emphasises questions of negotiation and power dynamics in knowledge production; knowledge must be seen for the worldly decisions it informs as much as the theoretical systems it sustains.

However resolving differences between competing interpretive schema is substantially beyond the scope of this thesis and no attempt is made to justify a position. Instead potential realisations of several schema are outlined.

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CHAPTER 1: Introduction

In 1997 the Investigator Science Centre in Adelaide commissioned the development of a new exhibition on Indigenous Knowledge Traditions. The aims of this exhibition include: to promote an alternative to western perspectives of science and technology; to acknowledge the contribution of Aboriginal and Islander people to environmental and technological achievements; to demonstrate the diversity within Indigenous Australia; and to consult and involve Aboriginal and Islander people from various regions throughout Australia in all stages of the development, fabrication and implementation of the exhibition. A full list of exhibition aims is given in Appendix 1.

The draft exhibition brief proposed an interactive exhibit¹ recognising the inventions of David Unaipon. A Ngarrindjeri man who spent much of his life in the Goonyia (non-Indigenous Australian) world, Unaipon is remembered as an inventor, a writer and a speaker and is commemorated on the fifty dollar note.

Aim of this thesis

This thesis examines the appropriate design for textual material for a non-Indigenous Australian audience for an interactive science centre (ISC) exhibit celebrating David Unaipon.

There are three components to this examination.

First, the practice of interactive science centre writing is examined. This enables the use of a style suitable to the visitor's experience.

The technique of interactive science centres demands an emphasis on physical interaction. Written information is minimised with respect to other sensory communication. Generally, text panels are limited to an amount of text able to be

¹ Throughout this thesis I use the term 'exhibition' to refer to a complete thematic public display and the term 'exhibit' to refer to an individual component within the larger exhibition.

read in less than one minute—typically around two hundred words. Additional information is sometimes included as a handout for schools or other visitors on a guided tour of the exhibition.

For the purpose of this thesis, I will develop a biographical text panel of 250 words and a longer, accompanying text of 1000 words. These arbitrary figures are slightly generous but indicative of the word lengths of ISC text panels and handouts.

Second, existing representations of David Unaipon are critically evaluated. This facilitates the development of suitable content for the text panels.

Third, theoretical frameworks for the representation of knowledge in a textual form are discussed. This is not intended as an evaluation of the 'true' nature of knowledge. Rather, different viewpoints are identified in order to allow critical reflection on the way particular content about David Unaipon is selected, omitted or emphasised in textual productions.

The different frameworks are illustrated in sample biographies of David Unaipon, each of which is written from a different framework. It is emphasised that these biographical text panels are preliminary at best. For reasons developed in more detail later, this text material, although the end of the process within this thesis, could only be the beginning of an exhibition design process.

Each framework has its strengths. I argue in this instance for a particular framework to be adopted, as it is more appropriate and, for me, more interesting. I have labelled this framework the "Border Crosser" model. It particularly focuses on the negotiations which occur in knowledge production. I make this recommendation on the basis of the stated aims of the exhibition. I also believe that in many ways this framework is more insightful about David Unaipon.²

² David Unaipon was a person whose expertise did not comfortably sit entirely within the domains either of 'Traditional Indigenous Knowledge' or of 'Western Science'. The viewpoint taken by the exhibition about the relationship between different kinds of knowledge must be able to account adequately for a person whose intellectual life spanned these domains—and the regions 'in-between'.

The work in this thesis would be extended by a full exhibit design development. This would necessitate collaborative development of exhibit content with Ngarrindjeri relatives of David Unaipon; oral history research into the life of David Unaipon; textual production for an Indigenous Australian audience; and decisions about the interactive exhibit. All of these issues are deeply connected with the issue of Unaipon's relatives' ownership and control of his material and intellectual heritage.

Such collaborative development involves one in the day-to-day reality of the community. Research and representation always involves questions of resources. Undertaking such a project requires a commitment to the material semiotics of Indigenous Australian communities. This is a lifelong commitment for Indigenous Australians; it is reasonable for these communities to expect no less from Goonya researchers.

Why do I want to talk about Unaipon?

It is impossible to disentangle either the stories within this thesis or the story of this thesis itself from the story of Australian colonialism. The possibilities of David Unaipon's life were shaped by European settlement of Aboriginal land; this potential was also frustrated by prejudice and bigotry. Nearly a century on, my story is also made possible by a colonial background and I must consider carefully how I recreate this history. Said powerfully cautions:

Each age and society re-creates its "Others". Far from a static thing then, identity of self or of "other" is a much worked-over historical, social, intellectual and political process that takes place as a contest involving individuals and institutions in all societies (Said, 1995: 332).

Colonialism involves more than just physical usurpation of the land and resources of the colonised. It also involves imposition of cultural forms, identities and histories. Indigenous Australians have had their culture ignored, suppressed and appropriated. This is not a process which happened solely in the past, but one which is still occurring today in evolving forms.

With this awareness it is important to consider my relationship as author to my story. My personal background and motivations are not independent of the story I will tell—they are very much a part of it:

Do you think that, in a sense, I can legitimately take an interest in things to do with Aboriginal culture if I tell my own story, don't pretend to tell theirs?

Yes, I think that is an appropriate procedure, but bear in mind how easily that story can be told by you while the Other *continues to be unable to speak* (Muecke, 1992) in Hosking 1995: 92).

I came to this project with a desire to educate myself about Australia's indigenous history. As my intellectual background had been predominantly scientific, it seemed to make sense to investigate the analogous field of knowledge in Indigenous Australian culture.

My first approach was to look for structural differences between Indigenous Australian and Colonial European societies which could explain the differences in knowledge systems. After some months I came to be critical of this position: it assumes that all Indigenous Australian cultures were substantially the same; it assumes that I could satisfactorily understand the content of Indigenous Australian knowledge systems; and it assumes that Indigenous Australian knowledge systems could be partitioned in a manner equivalent to Colonial Australian culture. I came to regard these assumptions as invalid, and I realized the limitations of this framework.³

As I began this revision, I was asked to undertake this research for the Investigator Science Centre. At this point my knowledge of Unaipon, like most Goonya people, was restricted to his noteworthy role in Australian commemorative iconography.⁴

³ This viewpoint is essentially a structuralist understanding of cross-cultural knowledge. It is a viewpoint commonly held by people with a scientific background. While I now regard it to be significantly flawed, I still find it easy to adopt. It should be noted that the aim of this thesis is not to find the "correct" framework of understanding, as each framework has its strengths and weaknesses, but rather to allow us to reflect productively upon our own practice.

⁴ Prior to Unaipon, representation of Indigenous Australian people in Australian currency had consisted of an anonymous portrait of an Aboriginal man on a one dollar coin and an uncredited piece of artwork on the one dollar note. This artwork had been bought by the Treasury

Scope and limitations of this thesis

My personal knowledge of David Unaipon was not significant before undertaking this project—David Unaipon died at Tailem Bend before I was born in Brisbane. Nor have my Goonya life experiences qualified me for an understanding of Indigenous history or knowledge traditions. To some extent, they do give me some insight into the way David Unaipon was perceived by Goonya Australians.

This thesis confines itself to an examination of the documentary record about David Unaipon. Already this framework biases the study towards non-Indigenous ways of understanding. Almost all of the contemporary newspaper accounts of Unaipon and much subsequent material has been written by white authors. In my documentary search, only one text—apart from Unaipon's own—appeared which was sourced in the Ngarrindjeri community. That was a transcription of a talk given by Henry Rankine to the South Australian Anthropological Society. As I will detail later, such information about Unaipon is the most valuable. Neither my background, nor the constraints of time and resources on these thesis, put me in a position to access this material effectively—nor do I think it appropriate that I should.

Indigenous Australians have long been denied proprietary rights. This is most obvious regarding the dispossession of their lands, but just as invidious has been the denial of their ownership of their culture. Bodies and artifacts have been forcibly removed from indigenous communities, artwork and stories have been reproduced for profit without acknowledgment and information has been recorded and transmitted without consent. Terri Janke comments that:

The commercialisation of [Indigenous cultural and intellectual] property has often been done without respect for Indigenous cultures, without Indigenous control and without sharing the benefits with relevant communities. Indigenous cultural heritage has often been distorted and mutilated for commercial interest and there is concern that this cultural heritage is being eroded (Janke, 1998).

from the British Museum, without regard for the artist. It is ironic that Unaipon, thus the 'first' Ngarrindjeri man to appear on Australian currency, also suffered plagiarism.

Unaipon himself suffered a blatant case of plagiarism (Jones, 1989). Many Indigenous Australians are wary of white researchers because they fear that such cultural appropriation still occurs. Henrietta Fourmille comments that:

While the situation is changing with the emergence of Aboriginal scholars, historians and story-tellers like Kevin Gilbert, Bill Rosser, Marcia Langton, Colin Johnson, Roberta Sykes, Maureen Watson – just to name a few who quickly spring to mind—in the context of Aboriginal sovereignty it is completely untenable that one 'nation' (that is European Australia) should have a monopoly and control of such a substantial body of information concerning another, the Aboriginal 'nation' (Fourmille, 1996: 21).

For these reasons it is not intended that this thesis tell the story of David Unaipon as an Aboriginal Australian wise man. I believe that this is an important, sometimes awkward story—but it is not my story to tell.

Nor could this thesis attempt to outline a 'how-to' manual for representing Indigenous knowledge in a Science Centre context—like what von Sturmer describes as "a 'do-it-yourself kit'" (von Sturmer, 1981: 13). As von Sturmer points out, such a procedure is fraught with difficulty in any case. My background makes such an attempt inconceivable.

Rather this thesis is primarily an attempt to understand how European Australians have understood David Unaipon and what this can teach us about the relationship between the representation of science within our culture and the representation of the knowledge of marginalised groups such as Indigenous Australians.

It is recognised that the relatives of Unaipon retain ownership of his heritage. As such they are the primary sources for what information about Unaipon is appropriate to display to the wider community. Although the result of this thesis is a proposal for components of an exhibition, it is stressed that this is a proposal which needs to be developed collaboratively between Unaipon's relatives in the Ngarrindjeri community and the Investigator Science Centre.

Science Centre Communication

Interactive science centres are a relatively recent development in science museums, with the San Francisco Exploratorium and the Ontario Science Centre commonly considered the originators of the genre. In contrast to the collection-centred approach adopted by traditional museums, ISCs are activity based. This approach is summed up by the motto of the National Science and Technology Centre—"When I hear, I forget, When I see I remember, When I do, I understand".

In an ISC the textual information is strictly limited. Emphasis is placed on the physical interactive. Nevertheless, textual material plays an important role in linking the interactive display with the lived world of the audience. In order to be able to write such material, it is necessary to have some understanding of how people read it.

Hooper-Greenhill (1994: 22-25) has outlined a theory of the way that communication is widely understood by museum staff. In its simplest form, this involves a one-way process by which meanings are formulated into messages by the expert staff. These messages are then received by the audience. In recent years this model has been extended to include a feedback loop in which the audience communicate with the museum staff in order for the staff to determine whether the message has been correctly received. This model is criticised as not being sufficiently complex and Hooper-Greenhill suggests a move even closer towards an interpersonal model of communication, rather than a mass media one. This criticism is articulated more fully by Sless.

...making communication work does not depend on mixing the right message to get the right effect, but on thinking about the problem in a totally different way. Ideas of cause and effect, so much a part of traditional science, are not very productive in the study of communication....

People are not affected by messages, that is altogether the wrong way to describe what happens. People read messages using the range of rules they have available to them and which seem appropriate at the time. So when we study communication, we are studying rules made by people (Sless, 1996: 6-7).

Sless criticises any description of the message as an entity in its own right, preferring to think about communication in terms of author/message and audience/message relationships.

These approaches can be described as constructivist theories of communication, although it is noted that constructivism describes a family of theories across communication, education, psychology, philosophy and the social studies of science rather than precisely defining a specific theory.⁵

The idea that communication does not consist of faithfully implanting messages into the minds of passive audiences, because people apply existing understandings to any situation, is acknowledged in the study by Johnston and Rennie of visitors' perceptions in an Australian ISC:

To play their role effectively, the explainers must have some understanding, and recognition of the visitors' agendas so they can interact with them in an appropriate way. In other words, they must be aware of the visitors' personal and social contexts during the visit experience (Johnston & Rennie, 1995: 317).

One consequence of this is that it is very difficult to predict how visitors will react to interactive exhibits. The most effective way to determine this is not to predict, but to observe. Formative testing of prototype exhibits is an important part of the design process for ISC exhibitions.

The Investigator Science and Technology Centre has undertaken research identifying the audience for this exhibition and recognising the diversity within this audience. In particular it has been noted that this audience is comprised of both Indigenous and non-Indigenous Australians. For reasons outlined above, this thesis predominantly considers the Goonya audience.

Audience reaction to exhibits related to the Indigenous Knowledge Traditions exhibition was evaluated by placing them within existing Investigator displays. This indicated substantial interest from the non-Indigenous Australian audience for such a display. Further formative testing with this audience will be deferred until later in the exhibition development as the Investigator is concentrating on consultation with Indigenous Australian groups involved in the exhibition.

⁵ See eg the discussion by Matthews, Michael (1995) *Challenging NZ Science Education*, Palmerston North, Dunmore Press.

Schouten and Houtgraaf describe the methodology used by the Netherlands National Natural History Museum (NNM) when it was formed in 1984 by the merger of two other museums. With little experience in public exhibitions—both pre-merger museums had predominantly been academic museums—the NNM was forced to develop a design process self-consciously. According to Schouten and Houtgraaf this process employed four modes simultaneously

- *mode 1: from global to detailed preparation of the story-line with feedback in stages, checks with colleagues internally and externally*
 - *mode 2: the art of leaving out, effective communication by reduction to the essence, what do we need to tell, what is the very essence we want to communicate in our story-line?*
 - *mode 3: from content to form, from the start of the project there has been an organic integration of design in the development process; and*
 - *mode 4: feedback in stages on, and authorization from the management-team of the NNM.*
- (Schouten & Houtgraaf, 1995: 300)

Due to the limitations described above, this thesis will concentrate on the first two modes. This requires a conscious articulation of the author's attitude towards the story content and context. Coxall (1994: 134) cautions that "The writers of museum texts have a responsibility to the public and therefore have to be very careful that they do not convey implicit, unintentional messages."

In this case that involves trying to think about the science in David Unaipon's life—a matter which involves the relationship between South Australian colonial institutions and the Raukkan Ngarrindjeri community of the early twentieth century. This is a complex and contested area which draws on a wide range of studies. Guéron comments that this kind of explication of the social context of science has been to date largely ignored by museums and ISCs:

However, and this is becoming increasingly clear from the large and growing number of studies, science and technology are also human activities and, as such, they are linked with the rest of society. In other words, what is currently lacking in the museological representation of science and technology is their social dimension and their complicated network of relationships with a wide range of aspects of community life in every society (Guéron, 1986: 133).

This presents a significant challenge for ISCs. Many of the staff at ISCs see their job as advocacy on behalf of science. As Wynne points out:

In many dominant formulations (eg Royal Society, 1985) public understanding of science is equated with public appreciation and support of science and with the public's correct understanding and use of 'technical' knowledge and advice. Thus when publics resist or ignore a program advanced in the name of science, the cause is assumed to be their misunderstanding of the science (Wynne, 1995).

This attitude can lead to an unwillingness to represent scientific uncertainty or injustices done in the name of science, as it is felt that such displays may reinforce anti-scientific attitudes. Guédon lists this as a reason why ISCs rarely include this social aspect of science in their exhibitions, and then goes on to comment:

The second reason for this almost total exclusion of the social dimension of science and technology from science museums is that it is very difficult to incorporate that dimension effectively in an exhibition. This difficulty is compounded by the fact that there is a growing trend in museum work to reject words and to rely solely on visual impressions and interactive modes. The social dimension of science seems to be so closely linked to verbal analysis, arising as it does largely in academic circles, that there seems to be no known way of representing it without using words (Guédon, 1986: 134).

On the other hand Simpson (1996: 44–49; 261–264) argues that museums benefit from a willingness to accept more controversial 'points-of-view' and to accept controversy over their own past or present actions.

I decline to accept one part of Guédon's challenge—I will not attempt to produce a non-textual representation of the social dimension of science. I will however investigate ways in which this relationship can be explicated for David Unaipon, given the limitations on textual material imposed by the ISC style.

Summary of aims

The aim of this thesis is to examine appropriate text design for an interactive science centre exhibit commemorating David Unaipon. Such design is confined to existing documentary records about David Unaipon and writing for a Goonyia audience.

There are three components to this. ISC practice is examined. Existing representations of Unaipon are critiqued. Theoretical frameworks in which the textual production might be situated are outlined.

It is important to recognise what this thesis is not: it is not an exhibit proposal, as the required collaborative development is yet to be undertaken.

Chapter 2 outlines possible frameworks of understanding about science.

Chapter 3 investigates existing representations of David Unaipon.

This material is critiqued in Chapter 4. The “Art of Leaving Out” is applied in the writing of sample text panel biographies which are then evaluated.

CHAPTER 2:

Alternative frameworks for representing knowledge

In this chapter I outline several overall strategies available for representing indigenous knowledge in an interactive science centre. This is done by considering various frameworks taken from the understanding of science and how science relates to indigenous knowledge traditions.

Frameworks of representation

As discussed above, the way an exhibition is communicated cannot be separated either from the subject matter it communicates or from the audience who engage with the exhibition. This is true even when the subject matter is relatively unproblematic. The relationship between science and society is a contested area with polycentric knowledge claims. It is a significant challenge to incorporate this into exhibition design.

Callon (1995) identifies four theoretical approaches to the study of science and technology:

I have distinguished four models, each of which emphasises a central issue. The first is that of science as rational knowledge where the object is to highlight what distinguishes science from other forms of knowledge. The second is that of science as a competitive enterprise, where the main concern is the organisational forms that science takes. The third is the sociocultural model and particularly the practices and tacit skills that it brings into play. The fourth model, that of extended translation, attempts to show how the robustness of scientific statements is produced and simultaneously how the circulation space of statements is created.

Callon goes on to classify Popper, Habermas and Holton under the first model; Merton, Bourdieu, Hagstrom and Latour's early analyses under the second; Kuhn, Wittgenstein, Collins, Shapin, Knorr-Cetina and Bloor with the third; while extended translation has been developed most famously by Latour and Law.

I shall adopt this classification with a slight modification. Following Gieryn (1995) I consider Kuhn's sociocultural model basically to be an essentialist one, and I will consider him, along with the Callon's 'competitive enterprises' model, under a heading of 'Structuralism'. I shall also consider some viewpoints from feminist theory (which, as Callon acknowledges, this classification does not adequately address) and cultural studies.

After sketching each of these frameworks I will discuss how they have been applied to the understanding of indigenous knowledges. This is the context in which the audience of the exhibition will see this exhibit. As such it is important to consider this relation, even though Unaipon's work went outside a simple construction of 'indigenous knowledge'.

Universalism—science as rational knowledge

The main feature of this belief is that science is distinguishable from other forms of knowledge—which are not true knowledge but superstition or pseudo-science. This distinction can be determined from the character of the knowledge itself, without reference to the context of its utterance—scientific knowledge is non-indexical.

This is the question of demarcation between science and non-science which has been important for many in the philosophy of science such as the philosopher who coined the term, Karl Popper⁶. Generally, demarcation is sought between science and 'pseudo-science' such as astrology. However, it is clear that this also applies to non-Western knowledge traditions.

This position is held by most scientists and many scientific communicators, and one version of it is summed up by Huxley: "Science is simply common sense at its best; that is rigidly accurate in observation and merciless to fallacy in logic" (Gould, 1996: 419). It is the position associated with those "whose aim it is to defend science" (Chalmers, 1990: 6).

Universalism is most notable within those philosophies of science which have attempted to identify characteristic features of scientific knowledge. While social and historical contingencies may be considered important, they are primary only

⁶ eg (Popper, 1974).

in instances of 'bad' science. 'Good' science is ultimately shaped by the way the world is, rather than by the mindset of the scientist. A corollary of this approach is that the question of interpreting the evidence of the natural world as we perceive it, though not as unproblematic as in the Baconian model of science, is not a fundamental difficulty. Indeed many scientists, such as Roger Penrose, express a belief that mathematics is "the language of nature."

This approach to understanding science has a long tradition including Plato, Bacon, Descartes, Kant, the logical positivists' attempt to establish empirical testability as a criteria for the meaningfulness of a theory, Lakatos, and Popper's argument for falsifiability as the criterion for demarcation. More recently Chalmers, while eschewing the search for universally applicable scientific method, nevertheless argues for a generalised 'aim' of science which, in conjunction with historically contingent standards of evidence, preserves most of the features outlined above (Chalmers, 1990: 39).

As Universalism is concerned with the problem of demarcation and "defence of science", the question of cultural variation in knowledge traditions is not particularly meaningful. 'Good' science is held to be a universal form of knowledge.

Under this framework, however, less accurate knowledges can be analysed by science. One manifestation of this framework in relation to indigenous communities is nineteenth century anthropology. A more recent example can be seen in Wendell Oswalt's *Anthropological Analysis of Food-Getting Technology*. This purports to be an objective measurement of the complexity of indigenous societies' technology through a count of the separate components comprising the technology. This analysis embodies traditional Western techniques of ordering by number and reducing to components, but has little to say about social or religious complexity.

Structuralism—knowledge through organisational form

Under this framework knowledge is still based on an objective unitary reality. There is, however, a much looser fit between the 'ultimate' truth and the way this knowledge is understood by people. Mechanisms accounting for the production and form of this knowledge are described in various terms such as social, cultural and linguistic. Thus Structuralism places a greater emphasis on cultural differences as the source of variation in knowledge traditions than does Universalism.

As all knowledges ultimately approach the same reality, it is possible to evaluate these knowledge traditions. Western science is still in general held to be a superior model for reality, although there is considerably more scope for including aspects of other knowledge traditions to complement the occasional oversights of Western science. Such inclusions can generally be done with an unproblematic translation of the 'other' knowledge into the language of Western Science.

This is the framework adopted by most scientists or scientific communicators who accept as relevant the question of cultural variation of knowledge. Certainly, as I acknowledged above, it is the viewpoint which I initially adopted, and often still find myself adopting.

A central problem for this framework is to outline the social structures which lead to the production of scientific knowledge. One of the most influential of such accounts was Merton's description of scientific practice in terms of norms. The operation of these norms as a reward structure accounts for the distinctive nature of science (Merton, 1973).

Arguably the most influential description of science was developed by Kuhn⁷ and comes principally from a historical perspective. Under this account, scientific research is defined by paradigms—what it is that a group of scientists working in

⁷ Many theorists argue that Kuhn's theory of science is not an essentialist one. However, following Gieryn (1995), I believe that his characterisation of social organisation is sufficiently rigid and transferable to warrant such a classification. However, this debate is of little relevance to the outcome of this thesis.

a discipline take as prerequisite understanding to work in that discipline (Kuhn, 1970).

Anthropologists and linguists have also developed structural accounts which purport to explain the demarcation of European modes of thought from those found in cultures indigenous to other regions. Goody argued that the development of writing led to ways of thinking in literate cultures that were fundamentally different to thought in oral cultures (Goody, 1977). For Horton the distinction was that European culture was 'open'—willing to develop new beliefs for new phenomena—while indigenous cultures were closed—seeking to explain new phenomena in terms of traditional concepts (Horton, 1967).

An important contemporary example of how Structuralism is applied to the understanding of Indigenous Knowledge is the field of Traditional Ecological Knowledge (TEK). Lewis (1993: 8) argues there are two components to TEK: "Folk taxonomies (the ethnobotanical and ethnozoological classifications of plants and animals), and indigenous understandings of 'natural' processes". Both of these clearly correspond to equivalent aspects of 'Western' ecological knowledge. Such work has facilitated collaborations between Indigenous Australians and the staff of National Parks. Often, however, this framework centralises the knowledge of science, and regards marginalised knowledges as supplementary, which must be translated into scientific terms before being acted upon.⁸

Another interesting example of this framework is the cognitive psychological theories developed most notably in the context of pedagogical theory. Harris has outlined distinct features of the culture of remote aboriginal communities and

⁸ This is my understanding of the main focus of TEK research. As I discuss later, these frameworks should not be seen as rigidly isolated. Rather there can be considerable overlap, and one framework can be transformed into another with a shift of emphasis. TEK is a good example of this. If the emphasis is to provide a scientific validation of traditional practices, then the framework would be a Structuralist one. If the aim is to maintain or re-instate traditional practices as entirely as possible, then the framework would be a Relativist one. If the focus is on the way practices of both scientists and indigenous people have changed as a result of interaction then the framework would be Translation.

argues that these lead to different mathematical perceptions of space, time and money (Harris, 1991)⁹.

Many researchers who have attempted to explicate a relationship between indigenous knowledge and western science have followed this strategy. Bindon has outlined features of Indigenous knowledge and shown how these are in accord with science (Bindon, 1988). In this vision, scientific practice needs to be amended to accommodate this inclusion. However, it is a modification of form, not content, as there is no fundamental disparity between the two systems.

Relativism—science as cultural form

While Universalism rejects non-scientific knowledge entirely, Structuralism accepts it insofar as it can be translated into the language of Western Science. Some people, however, reject the possibility of such a translation. An example is the criticism of Sahlins:

There is a kind of academic defence of the cultural integrity of indigenous peoples that, though well-intentioned, winds up delivering them intellectually to the imperialism that has been afflicting them economically and politically. I mean the paradox entailed in defending their modes of existence by endowing it with the highest cultural values of Western societies (Sahlins, 1995: 119).

Relativists highlight the tacit skills and socialised schemas employed in the production and interpretation of knowledge—all knowledge is effectively a social construction, and makes little or no sense out of its local context. Different knowledge systems are incommensurable—they cannot be compared and each is equally valid.

Most Relativist accounts develop a principle of 'symmetry'. There are many formulations of this principle. One such formulation states that explanations for scientific belief must be of the same kind as explanations of other beliefs (Barnes & Bloor, 1982: 22–23). No recourse to 'nature' as an explanation is permissible. This principle has been developed by the Edinburgh school of sociology of

⁹ This work is another example of a complex position which emphasises interactions and as such is close to a Translation account. As it is ultimately grounded in the science of cognitive psychology, I am led to locate this work here.

science in their 'strong programme of science studies' while Relativism has been developed within philosophy by Feyerabend (Feyerabend, 1975; 1987).

Extended Translation—science as network

The preceding frameworks are all foundationalist—they describe knowledge as a product that arises from some underlying structures of the world. The fourth framework to be considered describes knowledge altogether differently as a result of processes of translation between humans.

This framework has been developed most famously by Michel Callon, Bruno Latour and John Law. Latour critiques the 'strong programme' on the grounds that it is inherently asymmetrical.

Thus it is asymmetrical not because it separates ideology and science, as epistemologists do, but because it brackets off Nature and makes the 'Society' pole carry the full weight of explanation. Constructivist where nature is concerned, it is realistic about Society (Latour, 1993: 94)

Experimental constructions are not the construction of scientists, so cultural causes can not be primary. Yet scientists engage in a social struggle over the interpretation of these constructions. Thus nature is not held to be primary either. According to Latour the task is to develop a description of science in which social and technical factors have equal weight. This is the principle of 'generalised symmetry' (Latour, 1993). All participants are described equivalently, accorded agency and described in terms of the connections they have and resources they are able to mobilise. Science is not a qualitatively different kind of practice to other knowledge traditions but rather differs in terms of the length and strength of the networks it is able to mobilise:

A document becomes scientific when its claims stop being isolated and when the number of people engaged in publishing it are many and explicitly indicated in the text. When reading it, it is on the contrary the reader who becomes isolated (Latour, 1987: 33).

This framework has been developed in relation to indigenous communities by Turnbull and Watson-Verran.¹⁰ Their analysis specifically highlights the local character of all knowledge. Knowledge cannot be characterised as either 'local' or 'universal' because all frameworks contain elements of both. Indeed the tension between the local and the universal is one of the main creative forces in knowledge production. This framework is used by Christie (1991).

Similar to the Relativist framework, here science is treated in a symmetrical manner. One way this is done is by referring to "science and other indigenous knowledge traditions."

The process of translation inevitably involves a power relationship rather than an epistemological one. These power dynamics are particularly evident in the treatment which Indigenous peoples' knowledge has received. While this knowledge was used, even relied on by Europeans, it was never accorded full rights until translated back into the language of the colonisers—such translation being the prerogative of people at the centre of this framework:

... 'discovery' [of the Platypus] was constituted not by the extensive Aboriginal knowledge of the creature, not even by reports from European scientists based in Australia, but only by similar reports from scientists based in Europe—the institutional 'centre' of science (Watson-Verran, 1989: 25).

A Translation framework, highlighting knowledge as a process, argues that while indigenous knowledge and science are fundamentally similar, they can be distinguished by the different ways they enable people to act (which involves different resolutions to the local-global tension in Turnbull and Watson-Verran's account and different structures of network in Latour's). This is not a distinction which can be generalised but one which has to be applied on a case-by-case basis.

¹⁰ Their analysis, particularly Turnbull's, is close to Relativism. Indeed Turnbull wears his Relativist badge with pride (eg Turnbull, 1993). However the emphasis that especially Verran has placed on negotiation and translation leads me to locate their analysis in this framework.

Feminist analyses of science

Feminist analyses of science also set out to critique the notion of knowledge as being primarily epistemological—and thus disembodied—and determined by an objective reality. Within this broad framework there are, however, a variety of approaches. As such it is misleading to describe these analyses under a single heading as if they accounted for a single viewpoint.

It is also a mistake to confuse the problem of seeing science as encultured with the problem of seeing it as gendered—to do so is to reify the privileged position of a white male scientist with respect to an undifferentiated irrational Other. Nevertheless many issues which have been investigated within a feminist framework are relevant across the boundaries.

Parker describes four strands which have been identified within feminist research: institutional barriers; 'missing' women scientists—the "her-story" of science; scientific definitions of women; and the definition of science (Parker, 1996). Similarly Fox Keller has identified four feminist criticisms of science: the "unfair employment practices" critique; the problem selection critique; the experiment design and interpretation critique; and the epistemological critique (Fox Keller, 1991: 279–281). Some of these positions—Parker's first three and Fox Keller's first—leave the structure of science largely unchanged and may be seen as compatible with Structuralism. The final critique in both schemas, however, presents a fundamental challenge to the nature of science: they seek explicitly to change the way science is done; not merely by whom it is done. Sandra Harding has argued that although no single model for such "successor science" exists, there already are examples of feminist sciences which need to be further developed (Harding, 1991: 296–312).

This is significantly different from a Structuralist viewpoint. It is also not a Relativist viewpoint, as both Fox Keller and Haraway make clear.¹¹ As Haraway has said:

Even more challenging to most Western ideas about knowledge, science itself is now widely regarded as an indigenous, and polycentric,

¹¹ Both Fox Keller and Haraway were practising scientists who came to feel alienated from the practices or products of their disciplines and sought to understand how this happened.

knowledge practice. That is natural science's strength, not its weakness. Such a claim is not about relativism, where all views and knowledges are somehow "equal", but quite the opposite. To see scientific knowledge as located and heterogenous practice, which might (or might not) be "global" and "universal" in specific ways rooted in ongoing articulatory activities that are always potentially open to critical scrutiny from disparate perspectives, is to adopt the worldly stance of situated knowledges. Such knowledges are worth living for (Haraway, 1997: 137-138).

This viewpoint has some similarities with the Extended Translation framework. However it places far more emphasis on the negotiation of, and hence instability of, identities.

Despite the earlier qualification, there are some clear implications from feminist analyses for the representation of Indigenous Australians within science. The goals of telling "missing histories" of science, or of challenging scientific constructions of prejudice such as the Social Darwinism common in Unaipon's time, are both broadly applicable. There is by now a strong tradition of the latter; the former is the object of such projects as this one. The question of whether more fundamental change to the process of science is required is also relevant.

Cultural theory

...shifting from the one to the other brings on pneumonia (Unaipon, in Advertiser 20.7.1914).

Haraway is by no means alone in critiquing static essentialist versions of identity. This is one of the main themes developed by Edward Said:

...one of the great advances in modern cultural theory is the realization, almost universally acknowledged, that cultures are hybrid and heterogeneous and ... that cultures and civilisations are so interrelated and interdependent as to beggar any unitary or simply delineated description of their individuality (Said, 1995: 348-349).

My objection to what I have called Orientalism is ... that as a system of thought it approaches a heterogeneous, dynamic and complex human reality from an uncritically essentialist standpoint; this suggests both an enduring Oriental reality and an opposing but no less enduring Western essence, which observes the Orient from afar and, so to speak, from above. This false position hides historical change (Said, 1995: 333).

Haraway has also cautioned against adopting inflexible positions. Much of her work has explored the fluidity of identity boundaries, and the possibilities for transformative politics that this fluidity allows.¹² With its emphasis on the dynamics of identity transformations, I label this viewpoint the 'Border Crosser' model.

This does not imply that transformation in the form of compromise is always desirable or even possible. Nor does it downplay the reality of Unaipon's Ngarrindjeri background. David Unaipon should not be analysed in terms of which aspects of his life were traditional Aborigine and which were Western scientist. Instead his identity can be viewed as being of a kind that, despite being grounded in a deep history, was new. This identity should be read in the context of the changes in society around him and those changes which he in turn tried to effect.

Summary of frameworks

I have discussed four main positions: Universalism; Structuralism; Relativism; and Extended Translation. The first three of these positions are foundationalist understandings of science; the latter is not.

These frameworks are not completely exclusive; there is some crossover between them. In particular Universalism, Structuralism and Relativism virtually exist on a continuum from total sharing of conceptual worlds to complete separation of conceptual worlds. While these are clearly distinguishable positions, Universalism can slide into Structuralism and Structuralism can slide into Relativism.

I have pointed out the connections between Extended Translation, Successor Science and Border Crosser viewpoints.

¹² eg Haraway, Donna (1991) 'A Cyborg Manifesto' in *Simians, Cyborgs and Women: the Reinvention of Nature*, New York, Routledge

Similarly, a complex version of Structuralism, where the social forms underlying knowledge production are understood as multiple and dynamic is close to an Extended Translation analysis, with its emphasis on the negotiation of knowledge.

I have outlined these positions only crudely and have failed to convey many of the subtleties involved. Inevitably, there will be positions which are inadequately addressed by this classification. However, as my purpose is not to discover the 'correct' framework, but rather to illustrate how differing viewpoints emphasise different features of a knowledge system, I believe this classification is sufficient.

Universalism posits that everything meaningful is shared. Underlying Structuralism is faith that what is shared is ultimately important. With Relativism what is important is what is *not* shared.

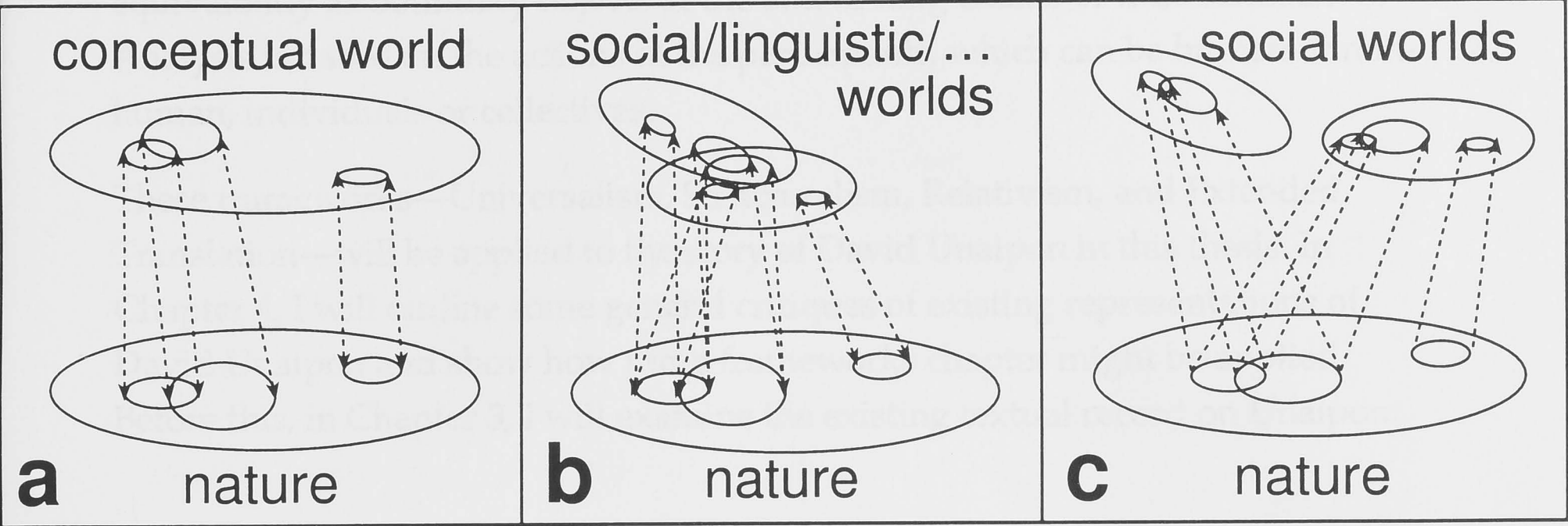
The Extended Translation viewpoint at all times emphasises the negotiations which are involved in knowledge production; what is important is how things come to be shared.

These differences are illustrated in Figure 1. Universalism postulates a division between the 'real world' of nature, and the world of ideas. This conceptual world is universally open to all human beings. There is an invertible map from ideas to nature—a map which often appears to be surprisingly isomorphic.

Structuralism and Relativism also imply a division of the world, but instead of the non-natural domain being conceptual, it is seen as social. It is also more differentiated—every society has aspects of its 'world' which are unique. Figures 1.b and 1.c are very similar. The main difference is that Structuralism implies an ability to map distinct societies on to each other, producing a translation of knowledge. This is represented by the two-way mapping between nature and society. For Relativism, such translation from one society to another is inconceivable. The conceptual world is so intertwined with the social world that there is no way of isolating knowledge which can be independently 'tested' against nature. Nature appears as a part of society; reverse translation is not possible.

figure 1—Three plus one frameworks for understanding knowledge

Three foundationalist frameworks



a Universalism

- Division between world of nature and world of concepts
- An invertible map between these two worlds

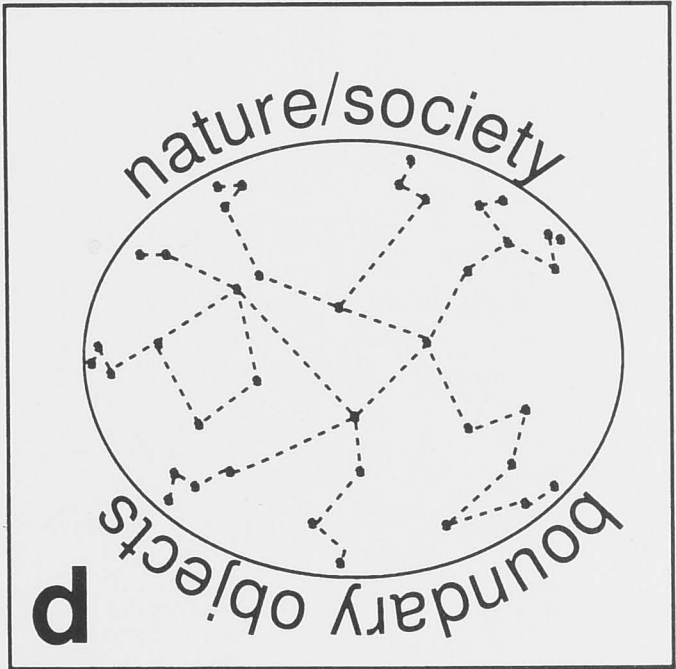
b Structuralism

- Division between world of nature and world of culture
- Can translate between cultures
- Translation 'to' nature provides a means of comparing knowledge

c Relativism

- Division between world of nature and world of culture
- No translation between cultures can be attempted

One non-foundationalist framework



d Extended Translation

- No division between world of society and world of nature
- All knowledge comes from the work of actors
- Actors form networks with other actors

The major difference in figure 1.d is that the distinction between nature and society is no longer automatically accepted. Instead, nature and society appear equivalently as boundary objects at the end of long chains of transformations. Analysis is based on the actions of the participants, which can be human or non-human, individuals or collectives.

These frameworks—Universalism, Structuralism, Relativism, and Extended Translation—will be applied to the story of David Unaipon in this thesis. In Chapter 4, I will outline some general critiques of existing representations of David Unaipon and show how these frameworks chapter might be applied. Before this, in Chapter 3, I will examine the existing textual record on Unaipon.

CHAPTER 3: The written record of David Unaipon

David Unaipon is the 'most famous Aborigine of his day' (*Aboriginal Newsletter*, 1982) and as such has been the subject of many texts.

In this chapter I will summarise the published information about David Unaipon. As much of this is discussed in detail elsewhere I will be selective, but with one exception will try to be relatively uninterpretative. I will analyse the scientific writings of Unaipon to some degree but will withhold a comprehensive critique of existing textual representations of Unaipon until Chapter 4.

Sources about David Unaipon

As he is a significant author, a reasonable body of literature has been written by David Unaipon and about David Unaipon. This body can be categorised roughly as follows.

Contemporary accounts:

- Unaipon's writings;
- transcripts of Unaipon's evidence before Government inquiries; and
- contemporary newspaper interviews with Unaipon and accounts of David Unaipon.

Subsequent accounts:

- literary criticism of Unaipon's writings;
- biographical pieces by Goonyas, Ngarrindjeri people and Aboriginal organisations or publications with a representation broader than the Ngarrindjeri community and;
- subsequent works about Ngarrindjeri people referring to Unaipon.

Unaipon as an author is most well known for his interpretations of traditional Dreaming stories. Many of these were published in his lifetime, while the Mitchell Library in Sydney contains a significant unpublished manuscript of these stories. Unaipon also had pieces published in newspapers and pamphlets

produced by the Aborigines' Friends' Association including 'Aboriginals their traditions and customs' (*Daily Telegraph* 2/8/24) and 'An Aboriginal Pleads for his race' (Unaipon, n.d.). Unaipon had two autobiographical pieces published in the Aborigines' Friends' Association Annual reports. His patent application is also of interest.

Unaipon also testified before several Government Royal commissions into the treatment of Aborigines and the management of Point MacLeay mission. The transcripts of these inquiries give useful insight into Unaipon's political beliefs (SA Royal Commission on Aborigines, 1913).

There were many contemporary newspaper reports about and interviews with Unaipon. These naturally were all written by white journalists. Two things are striking about these reports. Clearly Unaipon knew more about science than most of the reporters. This makes it difficult to assess what opinions were sincerely held by Unaipon and which are misrepresentations. Even more evident is the way they treat him as a curiosity, as in the following report of a conversation between a journalist and Dr Herbert Basedow, an anthropologist and (reported) friend of Unaipon's:

*On the other hand, that section of the type that migrated southwards into Australia found a happy hunting ground. No need was there for them to fight for existence, hence no call for any special ability, the result being that they remained in their primitive condition... Modern science and study has made the brain of the white man larger in the frontal lobes than that of the aboriginal, and it has more convolutions than the primitive brain. All the natural instincts are present in the aboriginal brain, however, and you will find that a native will rise to the occasion every time. You have an example before you in Unaipon. I agreed (*Daily Herald*, 1.6.14).*

Subsequent Goonya accounts of Unaipon have concentrated on his place in Australian literature (Beston, 1979; Shoemaker, 1989; Hosking, 1995). These authors do not go into his scientific work in detail. Generally they repeat the claims made by Unaipon in his autobiographical pieces, although Hosking discusses some of Unaipon's writing as a fusion of scientific evolutionary thought and Aboriginal belief systems.

Possibly the most substantial work written by a Goonya Australian containing material about Unaipon is Graham Jenkins' *Conquest of the Ngarrindjeri*.¹³ *A World That Was* by Catherine and Ronald Berndt also contains some interesting information about Unaipon, but it is mostly genealogical and nothing about his scientific work. *Ngarrindjeri Wurruwarrin, a World that Is, Was and Will Be* by Dianne Bell (1998: 126–128) re-evaluates the status of Unaipon's 'anthropological' knowledge, but says little about his science.

Some of the biographical articles about Unaipon do mention Unaipon's inventions (Ingoldby, 1980; Jones, ADB; Willmot, 1983). Some of these pieces repeat earlier claims about Unaipon's work. Philip Jones critiques many of these claims in his *Adelaide Review* piece (Jones, 1989).

Publications by the broadly based Aboriginal organisations (*ATSIC News*, 1996; *Aboriginal Newsletter*, 1982; SA Aboriginal Education Unit, 1996) have been essentially similar to these—short, biographical and tending to repeat claims made elsewhere in the literature.

The information about Unaipon held by his relatives is the least publicly available. A talk by Henry Rankine includes his personal memories of Unaipon. *Survival in Our Own Land* (Mattingley and Hampton, 1988) highlights the incidents of discrimination which Unaipon—like all Indigenous Australians—suffered, and his political responses to these. Yet this source of information is the most valuable because the other sources generally provide little detail and, with the exception of the anthropological accounts, rely almost entirely on a single source—Unaipon himself. It is clear that there is a richness of knowledge about Unaipon within the Ngarrindjeri community which has not yet been shared with wider audiences. The extent and form of knowledge which should be shared is of course entirely up to this community.

¹³ Jenkins (1979) spells Unaipon's name as Ngunaitponi, citing a personal conversation and the Daily Herald (1914) interview in support of his claim that this is the preferred spelling. Given that the focus of this thesis is on the public record about Unaipon and explicitly does not focus on Ngarrindjeri community knowledge about Unaipon I have chosen to adopt the more common spelling throughout. However, the preferences of Unaipon's Ngarrindjeri relatives should be checked on this matter in particular—as well as the exhibition in general—before the production of any public material about Unaipon.

Origin stories

European traditions tend to be very interested in origin stories. David Unaipon was born in 1872, but so much of his life was structured by the colonisation of South Australia, the dispossession of his people, the coming of the missionaries to Raukkan and the conversion of his parents to Christianity that this seems a peculiarly inappropriate place to start his story.

There is however, some interest in Unaipon's own written tales of his origin. *My Life Story* begins as follows:

The story of my life begins 78 years ago when I made my advent into this world in a native wurley along the banks of the River Murray at Tailem Bend (Unaipon, 1951)

This is repeated elsewhere. Most writers agree that the spatio-temporal point of origin for David was his parent's stone hut at the Point MacLeay mission in South Australia, 28 September 1872. David's father James Unaipon was born at Tailem Bend into a pre-contact Aboriginal society. Jones refers to this discrepancy in the *Adelaide Review*:

Despite his own embroidery of his past 'savage' origins (My Life Story), Unaipon was not born 'in a native wurley along the banks of the River Murray at Tailem Bend' and did not live 'according to the customs of a primitive race'. He was born on September 28, 1862, in a stone cottage at Point MacLeay mission station (Jones, 1989).

It would appear that this is the article Rankine is referring to in his address to the Anthropological Society:

Old Uncle David, I read a piece in the paper one day, that someone put in the paper, that he was telling lies and that made me really, really cross because he was great in my eyes. He gave us our children's names and where they came from (Rankine, 1990).

Is it necessary to interpret Unaipon's version of his generation as "lies"? There are many ways of telling a story—if we accept that it was James Unaipon who

satisfies the truth-claims in David's story then how do we understand David referring to his father in the first person? Later on in the piece Unaipon remarks:

I can vividly recall those days of my youth, for our home life and the homes of others were greatly disturbed by the advent of the white man into tribal lands (Unaipon, 1951).

Unaipon is apparently writing for a white audience that understands little about the realities of Ngarrindjeri life and *My Life Story* seems to draw on a more collective narrative than Unaipon's own linear trajectory. Perhaps it is the fixation with origins which impels an evaluation in terms of truth/falsehood. This incident suggests a need to look beyond literal boundaries to draw connections with other points of departure—and arrival.

The dynamics of relationship between Nunga (Indigenous Australian) and Goonya are still undergoing change. In the lifetime of James Unaipon they went from a situation where the Ngarrindjeri had sole occupation of the Coorong region to a situation where mostly English settlers had forcible possession of most of the land for the purposes of farming while the Ngarrindjeri were mostly confined at the Point MacLeay mission on a small patch of land of poor farming quality, making them dependent on organisations controlled by the invaders for their chief forms of sustenance.

At the time of David Unaipon's birth the Point MacLeay mission was, according to Jenkins (1979), sustained by a strong Ngarrindjeri community and a relatively enlightened missionary, George Taplin. Other writers such as Bell (1998: 105) dispute how benevolent Taplin was, but few question his impact on the mission and the community. The Ngarrindjeri had been dispossessed, and much of their traditional culture was disappearing, but the community remained strong. The older generation had been raised in pre-contact society and collectively embodied the full cultural resources of the Ngarrindjeri. With this education, as well as the European education provided by the mission a generation of Ngarrindjeri entered the Goonya world confidently.

Unaipon's parents were both significant figures in the Raukkan community. Nymbulda, Unaipon's mother, was the daughter of the last *rappulle*, leader of the Ngarrindjeri *tendi*. Unaipon's father, James Unaipon, was one of the earliest Ngarrindjeri to convert to Christianity and had worked as a missionary. Despite

creating some resentment amongst traditionally minded elders by marrying Nymbulda in a Christian ceremony, James Unaipon became a major leader in the Raukkan community, and the Ngarrindjeri largely converted to Christianity (Jenkins, 1979: 162). Unaipon grew up as a Christian and was not initiated (Jenkins, 1979: 172). Berndt and Berndt (1993) note that around this time initiations were becoming less common, and soon ceased entirely.

By 1872 George Taplin had already been with the Ngarrindjeri at Raukkan for over twelve years. Taplin's writings are an important record of the lives of the Ngarrindjeri of this period. James Unaipon was close to Taplin, and an important informant for his writings. Jenkins suggests that James Unaipon should properly be considered the co-author of Taplin's works (Jenkins, 1979: 153). Although Taplin unquestionably believed in the superiority of the Christian religion, and European culture in general, he was sensitive to the value of the Ngarrindjeri culture, and the oppression they suffered—a sensitivity which appeared to increase with age. Taplin was supported by the schoolteachers John Ophel, and after 1885, Walter Hutley (Jenkins, 1979: 181). These teachers set out to provide a European education as good as anywhere else in the colony, and as the *Register* of 20 March 1879 observed, it is likely that they succeeded (Jenkins, 1979: 167).

David Unaipon in the white world

Other colonials who took an interest in Unaipon's education included C.B. Young, a former secretary of the Aborigines' Friends' Society. Unaipon was employed in Young's houses as a servant from 1887, when Unaipon was fifteen, to 1890 (Jenkins, 1979: 185). Although a servant, Unaipon had access to Young's library and his interest in reading widely was encouraged.

After this period of service, Unaipon returned to Raukkan and learned boot-making, one of the commercial enterprises attempted at Point MacLeay (Jenkins, 1979: 207). Unaipon found employment with an Adelaide bootmaker, earning 20 shillings per week. However he suffered a rupture. For the rest of his life Unaipon had to wear a truss, and was unable to perform heavy work (Jenkins, 1979: 229). Unaipon returned to Raukkan, where he worked as bookkeeper in the mission store. He furthered his interest in playing the organ by teaching himself Handel's *Messiah*. Later in life he described physics as his favourite field

of study, an interest which he developed by reading Newton's *Mechanics* at this time.

Unaipon commenced his public speaking career shortly afterwards. One of his first appearances was with the Raukkan mission's Glee Club tour. Throughout this entire period the mission struggled for funds. They were denied land which would be profitable to farm, and their most successful financial venture to date, woolwashing, had been destroyed by the increasing salinity of the lake and the spread of railways into the district (Jenkins, 1979: 206). The Glee Club was one of the few means by which the Ngarrindjeri could raise money for their community, and it toured Adelaide and districts regularly. In 1909 Unaipon and Phillip Rigney accompanied the Glee Club as speakers (Jenkins, 1979: 226–227; *Advertiser* 13/12/1909). After the performances, Unaipon would deliver a ten to fifteen minute lecture on the knowledge and traditions of his people. After this oration, Rigney would then address the question of how the audience could assist.

Public speaking continued through Unaipon's life. His public lectures included an address to the Royal Geographical Society's Annual General Meeting in 1914, and a lecture in Sydney's St Mary's Cathedral in 1923.

Unaipon married Katherine Carter in 1902. Their marriage is not reported to have been happy. Despite describing the care she gave him when sick (*Advertiser*, 20/7/1914), Unaipon reputedly treated her very badly (Ingoldby, 1980; Jones, 1989). Katherine Unaipon gave birth to a son, Talmage Unaipon. Katherine died in 1928 (Jones, 1990).

Unaipon spent much of his life travelling throughout South-Eastern Australia. On his journeys he would variously preach, sell pamphlets for the Aborigines' Friends' Association on which he earned commission, and promote his perpetual motion devices. Ingoldby (1980) describes some of the discrimination he faced on his journeys—discrimination which undoubtedly contributed to his advocacy for Indigenous Australians.

Unaipon's political ideas

I fully endorse what Professor Aggery said on this subject. "I am proud," he said, "of my colour. I stand for co-operation with the white man, not amalgamation, not conflict but co-operation. You can play a tune of sorts on the white keys of the piano, you can play a tune of sorts on the black keys, but for harmony you must use both the black and the white." (Unaipon, 1951)

Through his life, Unaipon continued to speak out, and write, about the injustices suffered by his people, and the responsibilities that white people had to correct these. On one occasion Unaipon was arrested for idleness after visiting the Point MacLeay mission, even though at the time he was carrying £3 and the typewritten manuscript he was researching at the time. "An idle man," he is reported to have said, "does not produce work such as this." (*Advertiser* 18/11/1926).

Unaipon gave testimony before the Royal Commission advocating that the SA Government take over the management of Point MacLeay mission from the Aborigines' Friends Association, and he also spoke publicly about this. He also assisted the Bleakely inquiry into Aboriginal welfare (*ATSIC News*, 1996). Unaipon was well known to the South Australian dignitaries interested in Aboriginal Affairs, and had some influence in government policy (Jones, 1990).

Unaipon explains in *My Life Story* how he feels compelled as a product of missionary education to be an advocate for their policies. Clearly Unaipon regarded his own upbringing as being a model for Indigenous Australians. His own love of reading and intellectual life are used as justification for his belief that:

You must leave the full-blood in the primitive state or take him right away from the bush. For my part I would sooner be working in an engineering shop in the city than living in the bush. I would not care if I never saw the bush from one month's end to the next. (*Advertiser* 20.7.1914)

These beliefs were expressed in other ways; for example Unaipon advocated for a Central Australian Aboriginal State (Jones, 1990). Jones also discusses Unaipon's part in the re-enactment of Tasmanian colonisation in 1910 (Jones, 1989).

These assimilationist policies of Unaipon's were by no means universally agreed with by Indigenous Australian activists. In 1938, he opposed the declaration by

the NSW branch of the Australian Aborigines' League of January 26th as a Day of Mourning, on the grounds that this would be too emotional and confrontational (Jones, 1990) and he wrote a letter to the Department of Aboriginal Affairs expressing this view. When this letter was released by the DAA to justify their obstruction of the meeting, one of the organisers of the Day, Bill Ferguson, wrote an angry public letter in reply (Horner, 1974: 63).

Unaipon's literary work

In 1924 David Unaipon published a newspaper article 'Aboriginals: Their Traditions and Customs' (*Daily Telegraph*, 2/8/1924) and in 1929 he became the first Aborigine to publish a book—*Native Legends* (Unaipon, 1929). Like most of Unaipon's writings, *Native Legends* consists of retellings of traditional Dreaming stories, adapted to a Christian framework. However, Unaipon was not to profit from his work as a writer. Commissioned by Angus and Robertson to write a collection of dreaming stories for £50, the publishers sold the entire collection to William Ramsay Smith for the same sum, without consultation or consent. The stories were subsequently published under Ramsay Smith's name without acknowledgment in one of the most blatant episodes of plagiarism in Australian publishing history. This episode is detailed by Bell (1998: 130).

Unaipon's scientific works

One of the reasons for Unaipon's fame was that he was an inventor, and familiar with much contemporary science. Contemporary newspaper reports focused on this aspect of his work although his literary output has been of more interest to most subsequent Goonya accounts of Unaipon. Unaipon continued working on his ideas about perpetual motion until his death on 7 February 1967, aged 94.

Unaipon's scientific work is discussed here under six categories. These are his inventions; his interest in perpetual motion; his knowledge of aerodynamics with respect to boomerangs and applied to the helicopter; his interest in light, solar energy and electricity; his knowledge of evolution; and his understanding of hypnotism and telepathy. Most of these are discussed in the interview which appeared in the *Daily Herald* on 1 June 1914.

Patented inventions

He invented the power driven mechanical shearing handpiece, which is still in use today (Willmot, 1983).

Between 1909 and 1944 Unaipon made eight separate patent applications in his own name. A further patent application was submitted jointly with G.F. Mason in 1919, and one patent application was registered under the name of Unaipon's brother in 1927.¹⁴

Unaipon's first patent was for an improved sheep-shearing handpiece. Telford Unaipon's patent was for a multi-radial wheel. Most of the later patents were based on Unaipon's idea for a gravity-driven perpetual motion machine, a problem he worked on all his life and which is detailed further later in this

¹⁴ It is impossible to ascertain from the public record the story behind this patent application. However given the rarity of patents submitted by Indigenous Australians at this time and the similarity of subject matter with Unaipon's work on perpetual motion it would seem that David Unaipon played at least some part in his brother's patent application.

chapter. Unfortunately it appears that all Unaipon's patent applications, apart from the first one, have been lost.

Only the first patent application, for the sheep shearing handpiece was awarded as much as a provisional patent. Probably a lack of capital was largely responsible for Unaipon's lack of success. In 1927, for example, Unaipon was refused a loan of £50 to complete a 'multi-radial wheel' (one of his perpetual motion devices) (Mattingley & Hampton, 1988: 126).

Not only did Unaipon believe that his work was not being supported, he also believed that his ideas had been stolen. In *Leaves of Memory* he says "Once or twice my instrument was stolen and I had difficulty in providing substitutes." (Unaipon, 1953). He also saw a sheep shearing machine in operation and believed that it was his invention which had been used. This led to a reluctance on his part to show his work to others.

Although it appears that at least one Adelaide sheep shearing company adopted Unaipon's handpiece, it seems likely that most companies simply ignored it. A handpiece providing linear rather than semi-circular motion was reported in the Sydney Morning Herald in the 1890's, considerably before Unaipon's invention. Although mechanical shearing was invented and largely developed in the Australian colony, the major manufacturing firms were subsidiaries of British companies and commercial development was controlled by these firms. Without the support of one of the major manufacturing firms, it is unlikely that Unaipon's ideas would have got the recognition they deserved, and they were probably overtaken by similar ideas emerging closer to one of the industrial centres.¹⁵

Perpetual Motion

Unaipon's interest in science was said to have been inspired by a lecture given at the mission. According to the *Daily Herald* (1914) interview, Unaipon's teacher "mentioned ... the three problems which had puzzled science—the philosophers' stone, the elixir of life, and perpetual motion. The latter problem attracted me."

¹⁵ This is an 'unfair employment practices' analysis of the situation as described in Chapter 4.

Unaipon considered the problem for the rest of his life and invented a number of prototype devices. It appears that most of Unaipon's patent applications were based on these perpetual motion prototypes. According to the descriptions of these devices, they appear to be based on the perpetually overbalancing wheel schema for a perpetual motion machine.

It is tempting to produce a scientific rebuttal of the notion of perpetual motion. Such an analysis would necessitate either ignoring or rejecting Unaipon's alleged status as a scientist. To do so would be to risk another overly literal reading of the public statements made by and on behalf of Unaipon about his perpetual motion devices. As mentioned earlier, Unaipon apparently knew more science than the reporters he talked to, and often modified the content of what he was saying according to the audience he was addressing. Both of these factors make it extremely difficult to assess from these statements exactly what Unaipon himself believed about these machines. Certainly he knew of their theoretical shortcomings as he outlined in 1915:

I studied natural philosophy, and when I read the life of Sir Isaac Newton and the laws of motion, it gave me a new line of thought. Experiments with gravitation taught me that the problem of perpetual motion would never be solved with the present knowledge of mechanics, so I experimented further with gravitation, hoping by that means to discover a new line (ABM Review, 1915).

Another glimpse into Unaipon's perpetual motion research is given by artist Lin Onus, relating a story he heard from Eric Willmot:

It appears that for many years David worked in the agricultural shows in rural areas. In a sideshow tent, he had erected a spring upon which a steel ball would fall. The steel ball would bounce back up but not quite as high as the point from whence it came. At this point David would explain to the audience his theory of perpetual motion and then pass around the hat, suggesting that if people were to give him some money he could then buy a stronger spring. (Onus, 1994)

Here we can see Unaipon in his role as showman and educator. His claims taken literally are ludicrous—but that is their point. We can also see how, for Unaipon, science is not simply abstract knowledge, but is part of his daily efforts to seek financial support for himself and political support for redressing the injustices suffered by Indigenous Australians. This latter point is further highlighted by Unaipon himself:

While some people regarded my attempt to find out the secret of perpetual motion as a dream, the instrument I often took with me to illustrate my studies, appealed to many of the educated, and this enabled me also to interest them in the welfare of the aborigines (Unaipon, 1953).

Helicopters

"An aeroplane can be manufactured that will rise straight into the air from the ground by the application of the boomerang principle," he contended... "This class of flying ship can be carried on board ship, the advantages of which are obvious." (Daily Herald 1.6.14)

David Unaipon ... discussed the possibility of inventing a plane which could rise vertically from a ship based on the boomerang principle. This was before helicopters were invented (SA Aboriginal Education Unit, 1996).

This is one of the most popular stories about Unaipon. However the first vertical lift-off was achieved in 1907 and many people had experimented with designs prior to this. One such design was reported in *The Scientific American* in May 1914 and the story included comparison with the aerodynamics of boomerangs (*The Scientific American*, 1914). While Jones' (1989) comment that Unaipon was "Repeating fairly orthodox scientific predictions of the day" might be a little Whiggish—aviation was still something of a crank field at this time—it does appear likely that Unaipon had read about such inventions as well as thinking about them from his own research.

Unlike other stories about Unaipon, his prediction of the helicopter has been repeated fairly accurately, with little embellishment. It is apparent that Unaipon understood the principles of aerodynamics and was not bound by the common prejudice against mechanical flight. These abilities place Unaipon with some of the best scientific minds of the day. However, many retellings of this story attempt to place Unaipon in a role as a creative originator of the helicopter—a role which cannot be maintained. I will take this up further in the next chapter.

Polarised light

Yet another complex problem that has claimed the attention of Mr Unaipon is the polarisation of light and the concentration of light at a

given point. "These would be the greatest weapons in future warfare," prophesied Unaipon.

"What power will be used—sunlight or electricity?"

"Both. We are gradually coming to an age when we might expect to be able to hurl electricity, like Nature does, for instance, in the shape of lightning." (Daily Herald 1/6/14)

Unaipon's interest in ballistics lead him to predict that the polarisation of light at a given point would eventually be developed to the stage where the principles would form the basis of extremely powerful weapons of war and that electricity and solar energy would be harnessed for this purpose.

The recent development of laser and similar weaponry attests to the vision of this man (Aboriginal Newsletter, 1982).

This story is the most obvious case in which Unaipon's work has been re-interpreted. Unfortunately there is little substantiation for the retrospective interpretation. It is noted that, in the original, Unaipon talks of the polarisation of light and the concentration of light as separate things, whereas in the *Aboriginal Newsletter* version these two are combined.

The straightforward interpretation of Unaipon's comments are that he was referring to the collection and concentration of solar energy—such as in solar hot water collectors. Indeed this topic received a reasonable amount of discussion in *The Scientific American* in 1913–14. Solar water heaters may be less "visionary" than lasers but arguably they are no less significant.

The references to "the greatest weapons" and "hurl electricity" sound most like a description of the work of Nicola Tesla. In the *New York Times*, Tesla claimed that "It is perfectly practicable to transmit electrical energy without wires and produce destructive effects at a distance. I have already constructed a wireless transmitter which makes this possible" (*New York Times*, 1915).

Tesla was a famous inventor and engineer in his day and it is not unlikely that Unaipon was aware of his work. One aspect of Tesla's 'death-ray' speculations did in fact foreshadow the laser. However, this involved a reflection of electrical energy which was concentrated at the source, not transmitted over a distance. In contrast, the transfer of electrical energy without wires was based largely on Tesla's development of radio technology, (Seifer, 1996) and is exemplified in the

Tesla coils featured in many ISCs, whereby electrical devices are made to function without wires when electrical energy is pumped into the atmosphere.

Evolution

If there is anything in the scientific theory that our Aborigines are descendants of the Dravidians (a very ancient Indian race) then Aboriginal folklore may be among the oldest in the world (Unaipon, unpub.).

Unaipon was knowledgeable about—indeed appears fascinated by—contemporary understandings of the theory of evolution. As well as appearing in his unpublished manuscript *Legendary Tales*, Unaipon discusses evolution in his article 'Aborigines—Their Traditions and Customs' (*Daily Telegraph* 2/8/1924) and in a number of interviews.

In contrast to the Social Darwinism employed against him, Unaipon sees evolution as a source of pride, as it suggests that Indigenous Australians enjoy one of the longest continuous civilisations in the world.

Unaipon is also interested in finding concordance with evolution and traditional stories. In 'Aborigines—Their Traditions and Customs', (Unaipon, 1924) Unaipon describes a story which tells how the Ngarrindjeri came to their lands from the North-West 'connection' which he interprets as an isthmus connecting Australia to a large continent to the north-west.

According to Hosking this attempt to synthesise scientific and traditional Aboriginal belief systems is further developed in Unaipon's story 'Totemism' published in the booklet *Native Legends*.

In the space of two pages, Unaipon tries to weave these belief systems together, not in order to demonstrate the superiority of one set of beliefs over another, but rather to facilitate the co-existence of different beliefs without discredit or devaluation to either system (Hosking, 1995: 95).

Hypnotism and telepathy

From time immemorial we have understood the subtle art of hypnotic suggestion. Our medicine men, the "Moon-cum-bulli" have used charms etc to drive out pain (Unaipon, unpub.).

Questioned regarding smoke signals, Mr Unaipon said that Aborigines were certainly capable of communicating with each other across a distance which no speech could bridge.

"It is a matter of telepathy," he said. "There is nothing in the smoke. It is simply like the ringing of the telephone bell, to call your attention. You sit down and concentrate until you receive the message."

(Observer, 10/10/1925)

From the public record, Unaipon appears a firm believer—as are many Indigenous Australians—in the reality of telepathic projection, particularly premonition of the recently deceased.

"Does an educated Aborigine retain such powers?" asked the reporter.

"It is something which is lost," said Mr Unaipon, "when one of my people comes under the influence of civilization. It is latent in me, no doubt, but it is undeveloped. To a very slight extent I can transmit my thoughts, but not as my people do in their natural state." (Observer, 10/10/1925)

Summary of David Unaipon's scientific work

How scientific was Unaipon's work? As discussed in Chapter 2, drawing boundaries between the science and non-science is a problematic notion. However, at least a simplistic analysis can be undertaken. Invention is clearly a scientific occupation, if one often accorded secondary status. Evolution, aviation and solar energy are all mainstream scientific fields today, but at the turn of the century were all regarded with some suspicion. Perpetual motion remains firmly in that category. And despite the efforts of many researchers to bring

phenomena such as hypnotism and telepathy into a scientific framework, most scientists would regard these as examples *par excellence* of non-science.

How traditional was Unaipon's knowledge? His understanding of hypnotism and telepathy accord with the understanding of many people from his culture and other Indigenous Australian cultures. A large part of Unaipon's interest in evolution lay in finding concordance between the scientific theory and the traditional beliefs of his culture. Boomerangs obviously were a technology of which Indigenous Australians had long and extensive knowledge; arguably this knowledge was developed by Unaipon in a new manner. The same could be said of solar energy and light, while his inventions and interest in perpetual motion came almost solely from the colonial culture.

These issues are developed further in Chapter 4, where I outline specific critiques of existing textual material in order to develop appropriate text about David Unaipon. I then indicate how this text could be situated within the different frameworks outlined in Chapter 2.

CHAPTER 4: The Art of Leaving Out

In previous chapters I have detailed my knowledge of David Unaipon's life and scientific works and my understanding of the context of his life story. In this chapter I detail the process through which I 'filter' the information collated in the previous chapter in order to produce the short writings suggested for the public exhibit. I first develop appropriate text based on specific critiques of existing representations, and then apply different frameworks to produce biographies emphasising different aspects.

As outlined in Chapter 1, this involves a consideration of my relationship as author to the audience. I will not interact with the audience in the course of this thesis, so the audience is entirely putative. During formative testing this author-audience relation would be developed more satisfactorily.

My putative audience is principally a non-Indigenous Australian one. This is because, as I suggested earlier, writing for an Indigenous Australian audience involves an author-audience relationship which is not appropriate for me to construct. This thesis is concerned not with representations of Unaipon for Indigenous Australians, but with how the non-Indigenous Australian community has represented Unaipon. The final exhibition will be designed to cover both perspectives.

Although I am unable to predict the way this material will be understood by members of the audience, it is necessary for me to consider carefully the implications of this material. I have outlined my understanding of the context of this story in Chapter 3; now I will detail how this applies to the material at hand. In particular I will focus on five issues. The material will be written in such a way as to disrupt and challenge these readings.

Australia's 'Leonardo da Vinci'

Unaipon as a scientist

This oft-quoted characterisation¹⁶ draws links with the well known Renaissance inventor and scientist, popularly perceived as a creative genius ahead of his time, who envisioned devices, such as the helicopter, that would not be invented for centuries.

As such it draws on the Western mythology of science as a series of breakthroughs by geniuses such as Galileo, Newton and Einstein. I believe this is a flawed history of science; linking Unaipon to it is doubly flawed.

With respect to the helicopter, the laser and mechanical sheep shearing, Unaipon has been represented as a scientific visionary, ahead of the scientific mainstream. Meanwhile, the more crankish ideas of perpetual motion and telepathy have been downplayed, despite Unaipon's own belief that perpetual motion was the major scientific problem of his life.

Such representation stems from a desire to validate Unaipon's status as a scientist and draws on an essentialist understanding of science, perhaps modified by the 'unfair employment practices' critique. Not only does this representation distort Unaipon's intellectual life, it also misrepresents the nature of the scientific community.

Our traditions of scientific history have glorified the creative genius at the expense of the more gradual accumulators or disseminators of scientific knowledge. Attempting to place Unaipon in this tradition will ultimately leave him judged as a second-rate scientist. Unaipon's brilliance lay not in his outstanding originality—indeed most of the claims for his originality cannot be substantiated—but in his remarkable ability to synthesise different knowledge traditions, to see connections that no-one before him had seen, and in his superlative talent for communication.

¹⁶ eg Aboriginal Newsletter: Vic/Tas (1982: 11), ATSIC News (1996: 23)

Unaipon was not a great scientist working in isolation, as at least some commentators in his day realised:

He is now over fifty and may yet do great things. Of course, this is an age of specialists, and David is not a specialist. It is not likely, for instance, that he will be able to throw further light on the Einstein Theory, or perfect his model illustrating perpetual motion (My Magazine, 1931).

I argue that it is more productive—as well as more interesting—to view Unaipon as a scientific outsider, informed and intelligent but always on the fringes of scientific institutions. Rather than a scientist, Unaipon could be celebrated as a great scientific communicator.

Both in da Vinci's time and today, scientific breakthroughs depend upon the work of predecessors, colleagues and students, and the support of patrons. It was precisely this network from which Unaipon was excluded on the basis of his race. This exclusion ensured that Unaipon could never develop his talents in ways that would be recognised by scientific institutions.

Presenting Unaipon as a scientist ahead of his time downplays the barriers which Indigenous Australians faced and still face—on the one hand in gaining access to the scientific community and on the other hand in having their knowledge respected on its own terms.

“There's two kinds of Aborigines...” ***the diversity of indigenous Australians***

An important goal for this exhibition is “To demonstrate the diversity within Indigenous Australia”. The above stereotyped comment reflects a white culture which has largely treated Aboriginal history and culture in terms of generalisations. Only recently has there been a widespread recognition of the diversity of Indigenous Australian cultures both within and between language groups. On an individual level, many Goonya Australians are unable or unwilling to recognise the continued presence of Indigenous Australians who are thus rendered invisible.

Such generalisations allow people to hold opinions in spite of contrary evidence, such as the anonymous reporter who interviewed David Unaipon:

For a twentieth century citizen to be suddenly confronted with a man from the Stone Age would be an experience sufficiently piquant. But suppose, faced with the Stone Age man, he addressed you in cultured tones and proceeded to discuss with you the harnessing of gravity and the poetry of Milton? Your feelings would be probably somewhat similar to those of the reporter who interviewed David Unaipon on his visit to Adelaide last week. (Observer, 10/10/1925)

These views are a formulation of the social Darwinism used to mask racial prejudice. This also appears to be going on in the conversation with Dr Basedow quoted earlier in chapter 3. Dr Basedow and the anonymous white reporter felt comfortable acclaiming Unaipon's genius at the same time as marking him as the member of an inferior, "Stone Age" race. This ability to maintain prejudice in the face of contradiction is neatly expressed by the *Australian Board of Missionaries Review* headline: "Is the Australian Aboriginal a 'Degraded Creature': an interview with one of them" (*ABM Review*, 1912)

By highlighting the cultural specificity of knowledge, this exhibition introduces the diversity between groups. By featuring individuals the exhibition can introduce the diversity within groups—if the histories of the individuals are sufficiently contextualised.

In this instance, David Unaipon is preferentially referred to as a Ngarrindjeri man rather than as an 'Aboriginal'. There is discussion of his relationship with other Ngarrindjeri people, and with other Indigenous Australians.

Related to the issue of Aboriginal people being seen in terms of homogeneous generalities is the continual characterisation of Unaipon as a full-blood Aborigine as in the *Observer*, 10/10/1925 or the *Advertiser*:

People who are inclined to deprecate all efforts to educate the natives as being unprofitable will do well to remember that Unaipon is a full-blooded native (Advertiser, 12/4/1907).

The most straightforward interpretation of this is that his accomplishments would have been less surprising if even a little 'white blood' was present. This

attitude is echoed today generally with respect to Indigenous Australian activists who are often accused of being not really Aboriginal.¹⁷

Similarly there is the opposition of a pre-contact 'traditional' Aboriginal society with a supposedly degraded modern one under the sway of Western dominance—any trappings of Western society showing the presence of this latter form (Sheehan, 1998: 214–215). As argued earlier, cultures have never been isolated and static and certainly are not so now. In the words of Sahlins, "tradition is the distinctive way in which change proceeds" (Sahlins, 1996).

The story of David Unaipon is itself a useful challenge to this binary opposition. In these writings emphasis is placed on the diverse influences on Unaipon's thought without suggesting that any of these influences was the 'authentic' one.

Aboriginal heroes

White Australia's favourite Black man

The recognition of genius shown by Indigenous Australians—all too rare in Australian public culture—is an important goal of this exhibition. However there are problems if this is done uncritically.

It should be remembered that Unaipon is so famous because white people understood the achievements of this very remarkable black man and were amazed that a "full-blood native" could be so 'civilised'. This problem is discussed in general terms by Shoemaker (1994). Earlier Shoemaker (1989: 43–44) had used Unaipon's assimilationist views to contest Beston's claims that Unaipon was "By no means a white man's puppet."

The difficulty, however, is not simply in what Unaipon was, but in how he was represented by contemporary reporters. Certain opinions and writings of Unaipon were broadly acceptable to White Australia and were promoted. Other opinions produced a more uncomfortable reaction and were not so widely spread.

¹⁷ see eg Good Weekend, 10 October 1998: 35 for this attitude applied to Murandoo Yanner. Yanner discusses how this tactic attempts to undermine the legitimacy of his viewpoints.

Ultimately, it should be up to Indigenous Australians to recognise their own heroes on their own terms. The way a public celebration by an ISC of an Indigenous Australian is involved in this project needs to be carefully considered.

There are two specific instances of this issue which I detail: the 'First Aborigine to' syndrome, and the representation of Unaipon's assimilationist beliefs.

The 'first Aborigine to' syndrome recognition which downplays obstacles

One potential difficulty with the recognition of Aboriginal genius is if the criteria used to judge genius come entirely from the colonial culture, as in Unaipon's lifetime. Marcia Langton argues that focus on individual Aborigines is a way of hiding the racism that all Aborigines face:

There is an annoying tendency in the expression of the Australian paternalistic relationship with Aborigines: the first Aborigine to graduate, to play cricket, to box, and even to make a film... Indeed it is actually a denial of the racism against Aborigines. It is a way of saying that we are too backward to do it, not that we are denied the resources to do it (Langton, 1993).

Shoemaker points out that not only is this a product of racism but it helps to perpetuate racist judgements:

The racist milieu does not change in the least; in fact, the success of one Aborigine is often invoked to legitimise the status quo, for if someone like Manduwuy Yunupingu can do it, why cannot every other Black Australian (Shoemaker, 1994: 27).

This suggests that there is a problem with the recognition of Indigenous Australian achievements if it is implied that they are exceptional cases which prove the rule of Aboriginal inferiority. This was how contemporary newspaper reports talked about Unaipon. However, the remarkable stories of Unaipon's contemporaries such as Albert Karloan clearly demonstrate that Unaipon was not a 'lone genius' (Mattingley & Hampton, 1988: 125).

To avoid representing Unaipon as an 'exception that proves the rule', the fact that the conditions which gave rise to Unaipon also gave rise to a generation of able, articulate and educated Ngarrindjeri is discussed. This generation is not presented as homogeneous—some of the differences between them are

discussed. Unaipon's complex—and contradictory—character is described by discussing some of his weaker, as well as his stronger character traits. The claim that Unaipon was "the first Aboriginal person in Australia to have a book published" (SA Aboriginal Education Unit, 1996: 12) is generally avoided where discussion of the context of this achievement cannot also be included.

"Look at me and you'll see what the Bible can do."

Unaipon's assimilationist beliefs

This statement of Unaipon's is a deliciously double-edged summary of Unaipon's assimilationist vision.

Assimilation was government policy for many years. It was replaced by the Whitlam government with Self-determination—although many Indigenous Australians question the commitment of that government or any successive government, to real self-determination. Assimilation is still regarded by many Goonyia Australians as a desirable policy. This is evidenced by a recent book (Partington, 1996) which argued for the re-introduction of assimilation—a book promoted by then Minister for Aboriginal Affairs.

Unaipon himself strongly believed in assimilationist goals. He was a product of the mission system and strongly valued the education and religion this gave him. He believed that in time, all aborigines would integrate into white society as well as he had done.

Many of Unaipon's contemporary Aboriginal activists such as Jack Patten, Bill Ferguson and Pearl Gibbs were less concerned about confronting White society with the treatment of Aboriginal people. At the Day of Mourning, Ferguson said:

We have been waiting and waiting all our lives for the white people of Australia to better our conditions and we have waited in vain. We have been living in a fools paradise (Horner, 1974: 65).

It is noted that Unaipon's political goals were a product of his personal history, and were not universally accepted. Excelling within mainstream culture is one possibility for Indigenous Australians, but many believe that more radical change is necessary.

Situating a representation within a framework of understanding

In Chapter 2, I outlined a number of different ways of understanding the relationship between knowledge systems. I concentrated on four major frameworks: Universalism; Structuralism; Relativism; and Extended Translation.

The next step is to develop the last three of these as museological strategies denoted 'Unfair Employment Practices', Cultural Relativism and 'Border Crosser'. Sample biographies of David Unaipon based on these frameworks follow this development. Each of these is intended to be in a format which would be suitable for an ISC. They have been written to a word limit of 250 words, and would be expected to be a supplementary text panel to an interactive exhibit featuring one of David Unaipon's inventions.

This material was developed in stages. The sources detailed in Chapter 3 provided a comprehensive account of Unaipon's life. My first task was to consolidate this material into a single text, focussing on Unaipon's scientific work. This was done with respect to the considerations detailed above; the result is contained in Appendix 2. This text was written to a word limit of 1000 words and is intended as a possible handout sheet accompanying the exhibit.

The "Art of Leaving Out" was then applied a second time in order to produce the biographies. Each biography follows the same format. As well as introductory and concluding paragraphs (maximum 30 words each), there is one paragraph each on: Unaipon's background; his scientific work; his writing; and his political activism. However, each biography emphasises different aspects, resulting in a significantly different picture of David Unaipon. This illustrates the different understandings provided by each framework.

It should be noted that inevitably I have my own view about the validity of each framework. Generally, I favour Translation accounts as more satisfactory descriptions of scientific work. To some extent this will compromise my ability to write text from a different framework; I am not pretending to do so from a neutral position. However, I believe I have been able to grasp these frameworks sufficiently well for the purposes of this thesis. It is also noted that there are many similarities between the biographies—the difference is in emphasis.

Universalism

This is the traditional position of Colonial museums showcasing a cabinet of curiosities integrated by the theoretical and material realities of Western hegemony.

Although this position is no longer dominant in museum displays, it still appears to be the approach adopted by most ISC exhibitions. Scientific knowledge is presented as a set of 'facts' about the world. These 'facts' speak for themselves, and so contextual information is considered peripheral and is rarely provided. Such exhibitions focus on the notion of a single truth and hence are rarely concerned with any sort of diversity such as the representation of knowledge from traditions other than science.

Unfair Employment Practices

Where people from a scientific background concern themselves with cultural representation, this is the general approach adopted. However, as discussed above, due to the overwhelmingly positivistic emphasis of ISCs, such representations are still infrequent.

For an Indigenous Knowledge Traditions exhibition, this approach would seek to identify pieces of indigenous knowledge which have been verified by Western Science and explain how this knowledge was able to arise, usually by giving an explanation in terms of practical adaptive benefit.

To account for why the useful pieces of indigenous knowledge have not—until now—been recognised by Western science, this viewpoint would highlight institutional barriers to Indigenous Australians and the lack of funding for questions of interest to these communities. The “Unfair Employment Practices” biography emphasises the discrimination that Unaipon suffered and the validity of his inventions and research.

David Unaipon was a brilliant Indigenous Australian inventor and writer. He was “the most famous Aborigine of his day” and today is celebrated on the \$50 note.

Born in 1872, David Unaipon grew up on the Point MacLeay Mission at Raukkan, where he received an education as good as any in the South Australian colony. Aged fifteen, Unaipon left Point MacLeay to work as a servant in Adelaide, where his curiosity was also encouraged.

David Unaipon had a life-long passion for science. His many useful inventions included a more efficient sheep shearing handpiece. However these inventions were not recognised at the time. Some companies ignored his work, while others just copied it.

Unaipon was also the first Aborigine to have written a book. However he did not get recognition as an author, either. Angus & Robertson paid David Unaipon £50 for a collection of stories, but published them under the name of the white author William Ramsay Smith.

Despite facing such prejudice, David Unaipon maintained his vision of a harmonious future where black and white Australians worked together. He wrote many articles and made many speeches calling on white Australians to redress the injustices suffered by Indigenous Australians.

David Unaipon left a legacy which speaks to us to this day. Yet this legacy could have been so much greater if society in his day had been less bigoted.

Cultural Relativism

This is currently the dominant approach within contemporary museum cross-cultural displays. According to Richard Robins, the approach adopted by museums today is to present a "correct display of knowledge rather than a display of correct knowledge." (Pers. Comm.)

It seeks to outline the overall framework for indigenous knowledge, and to contextualise particular items of knowledge within that framework. Possibly it would describe how that framework has affected and been affected by encounter with the framework of Western science but in any case particular knowledges would only be discussed within the cultural framework, they would never be described in Western Scientific terms. The Cultural Relativist biography emphasises how Unaipon's cultural background shaped his life, while the culturally ingrained prejudice of white society ensured that he would never be fully accepted by them.

David Unaipon was a brilliant Indigenous Australian inventor and writer. Because of the prejudice that he faced his work would never be truly appreciated.

Unaipon's parents were among the first Ngarrindjeri to know contact with British colonists. After their land was stolen, the Ngarrindjeri formed a strong community at the Point MacLeay Mission at Raukkan in South Australia.

David Unaipon was born at the mission in 1872, and learned about Ngarrindjeri traditions from his elders. David also had his life-long passion for science stimulated by his mission schoolteachers. David tried to understand Ngarrindjeri traditions scientifically. For example he studied the aerodynamics of the boomerang. The results of this research convinced him that helicopters could be built. Because of the prejudice of white society, he was not taken seriously as a scientist and his inventions were ignored.

David Unaipon was also a famous writer. He collected the Dreaming stories of many Indigenous Australian communities on his travels. He suffered discrimination as an author when Angus & Robertson published his stories under the name of the white author William Ramsay Smith.

Like all Indigenous Australians, Unaipon experienced prejudice. His work was stolen and he was arrested for no reason. David Unaipon wrote articles and made speeches against these injustices.

Not even the bigoted white society of his time could ignore David Unaipon. Today Nunga and Goonyia alike can take pride in remembering this brilliant Ngarrindjeri man.

Border Crosser

As a relatively recent approach, museum representations within this framework have not been developed to a significant extent.

Such an approach would stress interactions, disputes over evidence and the power dynamics involved in translations.

The work of Turnbull and Verran (1995; Watson-Verran, 1989) in particular is highly productive for a project of this nature. David Unaipon could be seen as an Indigenous Australian who attempted to produce a translation of knowledge, which despite his undoubted abilities was largely ignored due to his position on the periphery of European knowledge. The Border Crosser biography emphasises the choices and transformations involved in Unaipon's life.

David Unaipon was a brilliant Indigenous Australian inventor and writer. He was famous, ignored and plagiarised in his lifetime.

David was born at the Point MacLeay Mission at Raukkan in 1862. He belonged to the first generation of Ngarrindjeri who grew up in contact with British settlers. He learned much from his school education and Ngarrindjeri elders, and furthered this education in Adelaide where he worked as a servant.

Unaipon had a passion for science. His life-long interest was trying to solve the problem of perpetual motion. Many of his inventions, including his sheep-shearing handpiece, came out of this work. Amazed by such an educated black man, newspapers labelled him "An Aboriginal Genius."

David Unaipon was also a famous writer. He collected the Dreaming stories of many Indigenous Australian communities on his travels. David adapted many of these stories to agree with his Christian beliefs and his understanding of the theory of evolution.

Like all Indigenous Australians, Unaipon suffered discrimination. His writings and inventions were stolen and he was arrested for no reason. David Unaipon wrote articles and made speeches against these injustices. He believed that education, such as his own, would allow Aborigines to fit into white society. Other Indigenous Australians disagreed with this goal—but none doubted Unaipon's efforts on behalf of his people.

David Unaipon lived in both the Ngarrindjeri and white colonial worlds. He had a viewpoint that had never been known before. Nunga and Goonya alike can learn from this viewpoint.

Evaluation

I make a recommendation for a framework to be adopted for the David Unaipon exhibit on two criteria: the stated aims of the exhibition (Appendix 1) and the ability of each framework to represent adequately David Unaipon's life.

The Exhibition aims which I specifically address are

"To promote an alternative to western perspectives of science & technology";

"To acknowledge the contribution of Aboriginal and Islander people to environmental and technological achievements";

"To demonstrate the diversity within Indigenous Australia"; and

"To create opportunities to incorporate Indigenous perspectives for Australian science centres and museums".

The biographies have been compared with the biography produced by the Mint for the release of the fifty dollar note. This biography, which was not used in the production of my biographies,¹⁸ is included as Appendix 3.

Broadly, the biographies are similar. However, written to a longer word limit (340 words) and less conscious of the level of language used, the Mint biography contains more detail including: the language Yaraldi spoken by Unaipon's parents; more detail about his patent applications and scientific speculations; his marriage to Katherine Carter; details about Government inquiries; and some extra information about his travels.

Of these, I value the inclusion of language group and the information about travels. Discussing languages is a useful way of recognising Unaipon's cultural heritage while situating his parents in a generation of first contact.

¹⁸ Of course the biography had been read as part of my research into David Unaipon. It is a curious consequence of this project, in which much is read but little is written, that my writing cannot claim to be 'original'. I can draw comfort from the questions raised by this thesis and by David Unaipon's life about the fetishisation of 'originality' in our culture.

The information about Unaipon's travels gives further insight into Unaipon's lifestyle and beliefs.

I am less certain about the inclusion of Unaipon's marriage without further discussion of his relationship with Carter. However, it is noted that this inclusion may be appropriate on other grounds.

I am also uncertain about the detail on Government inquiries. While this may give a reasonable view of Unaipon's own political beliefs, I am concerned that, without discussion of the lack of action resulting from these inquiries it may give an unbalanced impression about the concern of the Government for the welfare of Indigenous Australians, or about the opinions of the majority of Indigenous Australians then and subsequently.

It is noted that the Mint biography is closest to the 'Unfair Employment Practices' framework in its presentation of science. This biography follows the tradition of locating Unaipon in a history of creative individual scientists. While mention is made of Unaipon's interest in perpetual motion, emphasis is given to the 'safe science' of Unaipon and no links are drawn between his work on perpetual motion and his inventions.

I have already indicated that I prefer the 'Border Crosser' model for talking about Unaipon's science. This is primarily because it highlights connections between aspects of Unaipon's work and pays more attention to the development of Unaipon's ideas. I also prefer highlighting the nature of Unaipon's literary work as hybrid, rather than focussing on the plagiarism incident. It would be my preference not to describe Unaipon as "the first", at least without drawing connections to the work of other Indigenous Australians.

I believe that these features make the Border Crosser model better able to "promote an alternative to western perspectives of science & technology" and "to incorporate Indigenous perspectives for Australian science centres and museums" than the Unfair Employment Practices framework.

A Cultural Relativist framework, on the other hand, is less easily able to describe the diversity within Ngarrindjeri culture. I also believe that the 'Border Crosser' model is better able to describe the cross-fertilisation between Ngarrindjeri and

British culture that contributed to Unaipon's intellectual development than the Cultural Relativism model is able to do.

David Unaipon existed within—and between—two traditions. Himself comfortable with both traditions, it was the case that he was, to some extent, excluded from both. The way he was ignored by Western Science has been commented on. However, his extensive knowledge of Ngarrindjeri traditions was regarded as inferior by some within his community (Berndt & Berndt, 1993: 9; Bell, 1998: 120). His Christian upbringing, and fluency with Western ways, led to some suspicions about him. Yet the colour of his skin and his cultural background meant that he would never be truly accepted by white society.

The theory that is developed must be able to account for such a person. David Unaipon's knowledge was neither traditional Aboriginal nor Western scientific. Nor was it a simple mixture of the two. What Unaipon—and others like him, for he was *not* alone—developed was an entirely new way of being, made possible by colonial contact. This requires an account which is able to embrace a dynamic, rather than a static account of cultural tradition. Said comments:

Indeed the notion of a side is, where cultures are at issue, highly problematic, since most cultures aren't watertight little packages, all homogeneous and all either good or evil (Said, 1994: 12).

Such a position has already been outlined for Unaipon's literary works.

David Unaipon wrote from within what might be called a 'contact zone' between two races, where understandings and practices interlocked and customary perspectives were challenged. Indeed he may be seen as the first Aboriginal writer whose work demonstrated the creative possibilities and difficulties of the contact zone — possibilities and difficulties which Aboriginal writers today are still facing as they create literary hybrids which often fail to please either of the cultures which contribute to their making (Hosking, 1995: 86).

A Border Crosser model has been suggested—but only outlined—in this thesis. Fully developing such a framework for understanding Unaipon's scientific works is the final challenge presented by this thesis.

"Shifting from one to the other brings on pneumonia"
a Goonya first reader about the notable David Unaipon

By now the title of my thesis should be clearer. I am using this quote of David Unaipon to refer to the discussion of different frameworks for situating the text. It is an irony of the thesis that David Unaipon held a very definite view about the framework of science and of Nunga—Goonya relations in Australia. By and large that view is not shared by this author. I have, however, exhibited these frameworks specifically to allow reflection and comparison, rather than evaluation as 'right' or 'wrong'. The reader is explicitly invited to shift frameworks. It is hoped that, like Unaipon, they will recover from the resulting pneumonia. (Although it is also hoped that the role of the care-giver facilitating this recovery is more visible than that of Katherine Unaipon.)

The sub-title refers to the critiquing of existing representations of Unaipon. As a Goonya first reader, it is expected that the term Goonya will be unknown to much of the audience of the exhibition. It is hoped that the exhibition will facilitate such education.

It is also a reader on 'Firsts'. Portraying Unaipon as the "First Aborigine to", so common in the existing record, raises vital questions about who is representing Unaipon for whom. These are among the most important issues within this thesis.

Finally, Unaipon is certainly a notable man. On the fifty dollar note, shown in Figure 2, examples of all of the issues highlighted above can be discerned. Safe science is featured in a representation of Unaipon as Australia's Leonardo. This kind of history portrays Unaipon as a big individual in history. Yet behind his right shoulder are two small anonymous Ngarrindjeri. In fact, they are not anonymous, it is a portrait of Henry and Jean Rankine. This is a pictorial representation of "two kinds of Aborigines" for a Goonya audience with selective vision.

The design of the fifty dollar note and a consideration of the way that fifty dollar notes are employed on a daily basis raises questions of who is representing Unaipon for whom. (At least it wasn't the one hundred dollar note.)

figure 2—Graphic representation of issues around Unaipon on the \$50 note



a Safe Science

Unaipon's patents are featured rather than his perpetual motion devices.

b Two kinds of Aborigine

Unaipon is large and named; the Rankines are small and anonymous.

c Look at me and you'll see what the Bible can do

Unaipon believed the church was beneficial in his life; more arguable is its influence on other Indigenous Australian communities.

d The 'first aborigine to' syndrome

In his manuscript Unaipon claims to be the first Aboriginal author (but not the last).

The two specific representations of Unaipon as 'white Australia's favourite black man' are also featured. The presence of the Raukkan church highlights Unaipon's assimilationist saying "Look at me and you'll see what the Bible can do."

Unaipon's manuscript contains a self-characterisation as the "first Aborigine to"—although Unaipon has the insight to mention others of his people with him.

Finally, the resonance with the reverse portrait, Edith Cowan, the "First Woman in Parliament", is also noted. The sum is a fifty dollar note representing a liberal democratic vision of Australia's past. Whether such a framework can retain currency remains to be seen.

Chapter 7

Conclusions

Representing David Unaipon in an interactive science centre exhibit presents significant challenges. The audience for such an exhibit has diverse understandings and the social relationships involved are highly contested.

This thesis has confined itself to an examination of text design based on existing documentary representations of Unaipon, written with a non-Indigenous Australian audience in mind. This was felt to be the most appropriate way to conduct this research given my personal background.

David Unaipon's story is not just the story of a Black Australian, it is a story of Black-White relations, and both terms need attention. As such I have tried to focus this study on European Australian perceptions of Unaipon rather than try to erase my own ethnicity in a purportedly objective study of Indigenous Australians.

Further exhibit development necessitates collaborative involvement with Ngarrindjeri community as the acknowledged owners of Unaipon's heritage.

This research suggests that the Investigator Science and Technology Centre needs to be explicit about their motivations for celebrating David Unaipon. While Unaipon's brilliance and achievements cannot be denied, so often he has been represented in a manner which assumes Aboriginal inferiority, rather than promoting Aboriginal genius.

More broadly, this thesis has involved a discussion of the relationship between knowledge systems, particularly between central and marginal knowledges. It is difficult to talk about marginal knowledges in an institution as strongly committed to verifiable truth as a science museum. Yet in this challenge lies the interest.

The techniques of ISCs mean that textual information is minimised. This is achieved through the 'Art of Leaving Out'. Despite the brevity of such communication—or because of it—it is still crucial that the viewpoint of the exhibition be explicitly considered when writing the text.

A number of different frameworks about the nature of scientific knowledge have been discussed. Different frameworks imply different understandings about the relationship between Science and 'Other' knowledge systems. Different frameworks will also result in different strategies for representing knowledge in a Museum or ISC.

The dominant framework used in ISCs is an Essentialist one. This is inadequate for an exhibition of this nature, as it places scientific knowledge in a dominant position. This is disastrous for an Indigenous Knowledge Traditions exhibition, as it implies that any indigenous knowledge which cannot be classified as science is inferior.

To some extent this can be corrected by drawing on some themes from feminist analyses of science, in particular the 'Unfair Employment Practices' critique, and by adopting a more structuralist perspective in which different ways of modelling science are considered. I have argued, however, that this still risks marginalising the frameworks of indigenous knowledge.

The dominant framework used in museum cross-cultural displays is Cultural Relativism. This framework certainly respects indigenous knowledge but it does so by denying any kind of specialness for science—an approach ISCs are unlikely to feel comfortable with. I also believe that Cultural Relativism is not an adequate framework for describing the encounter and blending of cultural heritages that occurred with David Unaipon.

These frameworks have their strengths. I have argued that in this instance a third framework for representing knowledge is more appropriate. This is based on the extended Translation model of science studies, with input from the work of Verran and Turnbull, and Successor Science versions of feminist analysis. Such a framework centralises choices, negotiations and power dynamics in the generation of knowledge. As such it neither centralises science nor renders it impotent, and it is able to account for the kind of cultural blending referred to above.

Such a framework suggests a reconsideration of Unaipon's status as a scientist. Some commentators have tried to place Unaipon in the role of creative scientific visionary, ahead of his time. I have argued that it is more productive to see Unaipon as a scientific fringe-dweller, very much a part of his time. Regarding Unaipon as an isolated genius downplays the structural obstacles to Indigenous Knowledge integrating with scientific communities on a equal basis. It also distorts the nature of scientific enquiry. It is perhaps more interesting to celebrate Unaipon as a great scientific communicator rather than a great scientist.

Appendix 1 Goals of the Exhibition

Aims and Objectives

- To promote contemporary and traditional Aboriginal and Islander knowledge and lifestyle practices
- To promote an alternative to western perspectives of science and technology
- To present science and technology as an integral part of Australia's living culture
- To acknowledge the contribution of Aboriginal and Islander people to environmental and technological achievements
- To present this information as hands-on experiences that engage, stimulate and educate our visitors
- To demonstrate the diversity within Indigenous Australia
- To consult and involve Aboriginal and Islander people from various regions throughout Australia in all stages of the development, fabrication and implementation of the exhibition
- To acknowledge and protect the ownership of the knowledge
- To create an opportunity to incorporate Indigenous perspectives for Australian science centres and museums
- To develop information and stimulus for teachers and Aboriginal Education Workers to incorporate Indigenous content in their own science curriculum in schools

Appendix 2 David Unaipon information sheet



Portrait of David Unaipon
1892-1901, University and
Archives of the University of
California, Berkeley

David Unaipon

David Unaipon was a brilliant indigenous Australian inventor and writer. He was famous, ignored and plagiarised in his lifetime.

Today he is honoured on the \$50 note and for his place in Australian Black literature. The White community seems to have largely forgotten about his inventions. But it was his inventions that made the newspapers of his time proclaim him to be "An Aboriginal Genius"

A Ngarrindjeri man, David was born and schooled at Raukkan/ the Point Macleay Mission. Nymbulda his mother and James Unaipon his father could remember their first encounter with South Australian colonists. (David's father was named James after the missionary who converted him to Christianity).



Portrait of David Unaipon
from one of his pamphlets

David Unaipon was one of many Ngarrindjeri people who have gone out confidently into the Goonyia world. He had mastered his school education and learned much from his elders (although he was not initiated.)

David Unaipon lived a life between the Ngarrindjeri world, and the white colonial one. He never lost his interest in the knowledge of his culture.

Yet he investigated much of this knowledge from an entirely new viewpoint.

The vision of this remarkable black Australian is one we can all share.



David Unaipon and science

David Unaipon was a brilliant author, speaker and musician. However he often described how his special passion was for science.

He worked all his life on a perpetual motion machine, which he carried around on many of his travels. Parts of the machine still remain.

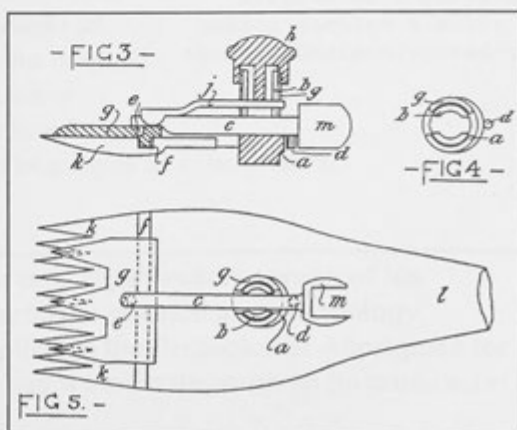
David made many useful inventions, including a more efficient sheep shearing handpiece. However he never succeeded in getting his inventions accepted by industry. Some companies ignored his work and developed their own versions of his handpiece. Some companies just copied it directly.

Without financial support, and without a mathematical training it was difficult for Unaipon to develop his inventions. Like many of his fellow Ngarrindjeri, David applied to the government for assistance, believing that the Protector of Aborigines should help indigenous Australians who wanted to make a start in business. However these requests were always refused.

Undeterred, David took his inventions on his travels. He showed them at fairs and at lectures he gave. He worked on his perpetual motion device right up to his death in 1967. David Unaipon once said "Even if I never arrive, I shall always recall with pleasure the hours I have spent and the experiments I have tried in endeavouring to solve a scientific problem."

Sheep shearing

Before David's invention, most sheep shearing handpieces had a blade which rotated on a central pivot. David invented one in which the blades went side-to-side, allowing sheep to be shorn much more efficiently. David was awarded a patent for this in 1909 and it was adopted by an Adelaide company—most other firms ignored it. However within a few years all companies had handpieces with blades that went sideways—as they do to this day.



Detail from Unaipon's
patent application

Boomerangs—and helicopters

David Unaipon was interested in boomerangs. He made many investigations into their aerodynamic properties. He was quick to understand that the forces behind the flight of the boomerang were similar to the ones at work in flying machines. This made him one of the first to realise that the helicopter was a practical machine, rather than a fanciful notion as it was generally regarded at the time.

Other scientific interests

David Unaipon never had the opportunity to work on his research with a community of scientists. Nevertheless he followed his interest in science with a passion. He spoke to university professors and read widely, and knew about much that was happening in the scientific world. He was interested in solar energy and polarised light, knew about the potential to transmit electrical energy without wires and tried to find evidence in aboriginal Dreaming stories that agreed with the theory of evolution.

Unaipon was interested in many things which scientists today would be uncomfortable about. He thought many Indigenous Australians had some telepathic ability. He believed that much of the power of traditional healers was due to hypnotism. Perpetual motion is also frowned upon by scientists—yet many useful ideas came out of his research.

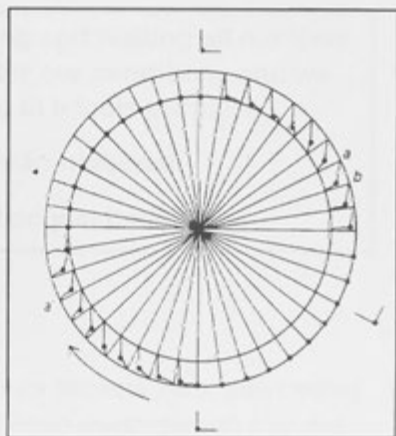


Diagram of a perpetual motion machine similar to the one Unaipon worked on.

David Unaipon was not the only Ngarrindjeri person of his generation who was interested in science and technology. In 1916 Albert Karloan applied to the Protector of Aborigines for a loan. Karloan wanted to buy a cinematograph so he could start a travelling movie cinema.

Like David Unaipon, Albert Karloan was refused assistance.

David Unaipon and politics

Like all indigenous Australians, David suffered a lot of discrimination. On one occasion he was arrested for loitering after he paid a visit to Point Macleay to visit his relatives and conduct some research.

Despite such incidents, David Unaipon maintained his vision of a harmonious future where black and white Australians worked together without prejudice. David was proud of his missionary education and believed that if his people received such education they would be able to fit into white society. Many contemporary indigenous Australians thought that David was too conciliatory to the white society which discriminated against them. However no-one could doubt his efforts in speaking out for his people.

Bill Ferguson says “We have been waiting and waiting all our lives for the white people of Australia to better our conditions and we have waited in vain. We have been living in a fools paradise”.

David Unaipon thinks this view is too confrontational.

What are they disagreeing about? What do you think?

David Unaipon's writing

David Unaipon is famous for his place in Australian black literature. He is often credited as the first Aborigine to have written a book. (A handwritten newspaper was produced on Flinders Island in 1836–37 by Thomas and Walter Brune, servants to the island's Commandant George Robinson.)

David Unaipon was fascinated with the Dreaming stories of his people and collected these stories from indigenous communities on his travels. David adapted many of these stories to fit in with European ideas such as Christianity and the theory of evolution.

Unaipon suffered discrimination when his writings were plagiarised.

The publishing company Angus & Robertson paid David Unaipon £150 for a collection of stories. When David submitted the stories, they published them under the name of the white author William Ramsay Smith.

Sources

Further Reading

Appendix 3 Mint biography of Unaipon

David Unaipon (1872–1967)

Writer, public speaker and inventor

David Unaipon made significant contributions to science and literature, and to improvements in the conditions of Aboriginal people.

A Ngarrindjeri man, Unaipon was born at the Point McLeay Mission, on the Lower Murray in South Australia, on 28 September 1872, the fourth of nine children of the evangelist James Ngunaitponi and his wife Nymbulda, both of whom were Yaraldi speakers.

Unaipon received his initial education at the Point McLeay School and as a teenager demonstrated a thirst for knowledge, particularly in philosophy, science and music. An avid reader, he was obsessed with scientific works and inventions and, with no advanced education in mathematics, he researched many engineering problems and devised a number of his own inventions.

In 1909 he patented an improved handpiece for sheep-shearing. Other inventions included a centrifugal motor, a multi-radial wheel and mechanical propulsion device; he was unable, however, to get financial backing to develop his ideas. He gained a reputation at the time of being “Australia’s Leonardo” for his promotion of scientific ideas. As early as 1914, Unaipon anticipated the helicopter, applying the principle of the boomerang. His search for the secret of perpetual motion lasted throughout his life.

Unaipon, who married Katherine Carter (nee Sumner), a Tangani woman from The Coorong in January 1902, was prominent in public life as a spokesman for Aboriginal people. He was often called upon to participate in royal commissions and inquiries into Aboriginal issues. In 1928–29 he assisted the Bleakley inquiry into Aboriginal welfare. In 1934, he urged the Commonwealth to assume responsibility for Aboriginal Affairs and proposed that an independent board replace South Australia’s Chief Protector of Aborigines.

As an employee of the Aborigines’ Friends’ Association for many years, he travelled widely and became well known throughout south-eastern Australia. While on his travels, Unaipon lectured on his ideas, preached sermons and spoke about the need for “sympathetic co-operation” between whites and blacks, and for equal rights for both black and white Australians.

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